Workshop

Programme design to address employability

Ministry of Education and Higher Education

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Reader EN
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Programme Design to Address Employability
Reader

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Introduction and Rationale

The concept of employability in higher education is multilateral and multidimensional; furthermore, there is no consensus on its meaning. However, it is commonly agreed upon that employability is a shared responsibility among different socio-economic players and stakeholders at the broadest sense. Yet, employability is a pressing demand from society
at large. In most countries, the populations often judge the efficiency of the government actions based on the evolution of the unemployment rates. Although depending upon all socio-economic sectors, the demand for a higher employability is first and upmost formulated towards the higher education institutions and systems. This pushes employability to the top of agenda of higher education nearly in all countries. Lebanon is not an exception in this regard. Therefore, the Lebanese HEREs have decided to organise on the 29th of November a Workshop to discuss how to address employability in the programme design.

When tackling employability, there is an agreement that the opinions of employers, students’ alumni, and educational agencies on the relevance of academic programmes should be systematically taken into consideration. This is often assessed as part of Quality Assurance (QA) processes. Different studies suggest that employers and alumni may also be directly involved in the design and review of study programmes. This suggests that promoting employability through higher education needs to involve all stakeholders in different aspects of an academic programme.

At the initial reflection about the workshop, three issues have prompted us to put forward this theme:

- Adapting the programme, when designed, to include cognitive and non-cognitive competencies (skills) required by the local and global markets,
- Improving the employment opportunities of fresh graduates, and
- Improving the relationship between higher education, business community and labour markets.

To tackle these issues, we shall start by defining the term employability and what can be assessed in the complex relation between higher education and employment. Afterwards, we list some suggestion to embed employability in higher education programmes and present the reference process of for organising a programme to address employability. And finally, we shall list some references and readings that help in further mastering the programme design or adjustment to address employability.

**Employability and Higher Education: Definitions and Relationships**

**Employment and Education**

Several studies are dedicated to clarify the relation between employment and education in general. It is commonly accepted that higher education graduates have better chances in the labour market than less well qualified peers. The Key Findings of the European ET 2020 country Workshop held in Brussels in February 2015 under the title “Promoting employability through higher education,” noticed that

\[ \text{On average, higher education graduates fare better (and often much better) than their less well qualified peers on the labour market; although, particularly in the wake of the economic crisis, the employment picture varies considerably across the EU}. \]

Some studies argue that the cost of higher
education is increasing while the value of the degree is falling reducing the basic notion of return on investment in higher education. This is based on data from the US where tuition fees are constantly increasing while the value of the degree does not follow the same increase rates. In Lebanon, the data provided by the Central Administration of Statistics in 2011 are alarming since they do not show a real advantage for holders of higher education degrees in accessing the labour market.

These previous facts push towards deepening the issue of employability and suggesting solutions to promote it. The workshop aims at exploring the possible mechanisms to promote employability through the design of the programme.

**Definitions of employability**

In his book entitled *Developing Employability*, A. Finot summarises the concept by defining employability as a synonymous of “the adaptation of employees to the labour market”. Whereas Encyclopaedia Universalis refers employability to “the possibility that someone has to be assigned a new job” and other sources underline the fact of “being desirable by the market”.

Considering adaptability and mobility of employees, the European Union glossary of Quality Assurance suggests a definition for Employability based on the *Scottish executive* and the Cedefop *Terminology of European education and training policy: a selection of 100 key terms*. Employability is defined as “The combination of factors which enable individuals to progress towards or get into employment, to stay in employment and to progress during career.”

The authors added the following comment to the definition mentioned above: “employability of individuals depends on:

- personal attributes (including adequacy of knowledge and skills);
- how these personal attributes are presented to the labour market;
- the environmental and social contexts (i.e. incentives and opportunities offered to update and validate their knowledge and skills);
- and the economic context.”

In fact, economic incentives could be very helpful.

In order to give more room in the analysis to the perspective of the demand for labour, authors like F. Green and G. Henseke suggest that the notion of “graduate job” has to be considered. They “… conceive a graduate job to be one where a substantial portion of the skills used are normally acquired in the course of higher education, including many of the activities surrounding it, and of its aftermath-the years after higher education when skills are acquired in work through graduates’ acquired faculty for learning them.” They
proposed a novel statistically derived indicator of graduate jobs, based on job skill requirements in three-digit occupations (ISCO-08).

Some of these different “approaches to” and “concepts of” employability integrates the entrepreneurial competency in the innovative definition of employability as it is mentioned below for the Capacity Building project Erasmus+ RESUME to boost the employability of graduates.

Consequently, “addressing employability” means among other synonyms “developing the competencies of individuals that allow them to access a job in favourable times and conditions where the graduate is not a passive Job Seeker but an up-to-date dynamic competencies Provider.”

Reference models
Several studies and recommendations have been formulated in the previous years to promote employability through higher education. In the following we refer to two of them.

**Enhancing employability**
In 2016 OECD has prepared a report for the G20 Employment Working Group. The major facts pointed in the report are:

- Skill requirements are changing rapidly as a result of structural shifts

- Workforce employability is essential to turn structural change into an opportunity for all

- Education and training systems, labour markets, workers and workplaces will have to become more adaptable

- Developing a set of concrete actionable principles
  - Assess and anticipate changing skills need
  - Reaffirm the importance of transferable skills
  - Identify actions to improve employability
  - Highlight the importance of policy coherence through a whole-of-government approach
- Promote institutional reform in public training organisations and improve arrangements to involve all stakeholders
- Stop reducing incentives to invest in training at the firm level

The previous principles are summarised around four areas:

1. Anticipating skill needs and adapting policies accordingly
2. Reinforcing the role of training and work-based learning
3. Enhancing the adaptability of workplaces
4. Promoting labour mobility

Anticipating skill needs is a major challenge in the Lebanese context for several reasons among them:

1. the limited number of prospective studies, if any, about the skills’ needs and,
2. the high rate of outgoing mobility for job seeking. In comparison, adapting policies and curricula within higher education institutions is relatively simple due to the autonomous characteristic of the universities.
3. Finally, tools for recognition of prior learning and for the development of lifelong learning have not been largely developed so far.

**Promoting employability through higher education**

The ET 2020 country workshop on “Promoting employability through higher education” has been mentioned above¹. The main policy conclusions of this workshop with a participation of thirteen countries are:

- Skills forecasting: It is important to study the dynamics and changes of the labour market to predict the demand for different types of graduates and skills. These studies shall inform policies in systems and institutions.
- Using graduate tracking data: Sophisticated systems to track the graduate and their professional pathways and careers have been put in place. The outcomes of these systems need to be better used to improve the orientation of the students and/or adjust programmes’ design.
- Managing supply of study places: There is a need to better align higher education provision to labour market needs.
- Embedding work-based learning in higher education: Diversifying the higher education system and developing professionally oriented programmes would enhance its effectiveness and foster employability.
Developing transversal skills: Creativity, entrepreneurship, linguistic skills and other transversal skills have to be further developed in a student-centred model of learning. These skills are required in the labour market and would help the graduates to face the challenges related to changes in the need of skills.

Increasing dialogue and mutual understanding among stakeholders: Embedding employability in higher education needs to be done in close cooperation with the different stakeholders especially the labour market actors. All stakeholders need to be aware of the importance of communication and dialogue which serve the mutual benefits.

European projects dealing with employability
Several European projects have been conducted in Lebanon and are related to employability. In the following we enumerate few of them stressing on their components related to employability.

**Tempus OIPULES**
The Capacity Building project Tempus OIPULES, funded by the European Union is an example of the collaboration between HEIs at a regional level. Beyond Lebanese HEIs, Syrian and Egyptian universities worked together to produce the Bokrajobs platform that present required competencies and jobs.

**Tempus PACOME**
The Capacity Building project Tempus PACOME, funded by the European Union, was dedicated, between 2012 and 2016, to study skill shortage, future occupations and future career opportunities in Lebanon. The partners worked on specialised knowledge and skills in architecture and engineering programmes, and divided the competences framework into 5 major components:

- Analytical knowledge and skills such as calculation, simulation and modelling.

- Factual knowledge and skills required in architects and engineers for problem-solving.

- Creative skills.

- Computing skills.

- Interpersonal and intercultural communication skills and attitudes.
One recommendation from PACOME was that “HEIs should integrate more creative design in their curricula and emphasise more on engineering creativity”.

**Tempus ADIP**
The project Tempus ADIP\(^1\) dealt with the definition of competences and competency-based education. More details can be found in one of ADIP deliverables entitled “Guide for the elaboration of a training framework based on the Competency-Based Education”.

When scanning what is being used in the different partner universities to relate their programmes to competencies two large groups of approaches were identified:

- The first group uses **learning outcomes** and renames them competencies, probably because they focus on a particular situation or a cluster of situations.

- The second group defines the competencies using the situation or cluster of situations. By consequence, in this last approach competency is contextualised.

ADIP partners proposed the following remarks:

- It is possible to imagine a multitude of situations and contexts for the same competency.

- It is impossible to integrate in one course all the situations in which a competency is likely to be useful.

- Therefore, the instructor must distinguish among all these situations the ones that:
  - are at the core of the course
  - are targeted as zone of transferability of learning
  - are treated in a superficial way

- It is not possible to define a competency without referring to a category of situations.

- It is important to determine for each competency its required level in every situation or family of situations. To define a level, different notations are available. The most known is the “Five-stage Model of the Mental Activities involved in Directed Skill Acquisition”\(^1\)\(^2\) of Dreyfus and Dreyfus

**Erasmus+ RESUME**
The main objectives of the Capacity Building project RESUME\(^1\)\(^3\), co-funded by the European Union programme Erasmus+, to boost the employability of graduates, are the following:
- To strengthen cooperation between higher education institutions and promote links with companies to foster entrepreneurship.

- To establish interdepartmental commissions for entrepreneurial learning
- To set up a network for South Mediterranean entrepreneurship that pays special attention to women.

A suggested process
As mentioned above, designing a programme to address employability is a process that requires several actions before embedding employability in the concerned programme. In fact, a minimum of the following steps is required to design or redesign a programme to address employability:

1. Market Observation

Observatory of skills needed by the market
In Lebanon, Higher Education Institutions (HEIs) do not have sufficient information and data that indicate the number of persons nor the competencies required by the market organisations (Companies, factories, plants, etc.). This is true about both static information about current market needs and dynamic information about the evolution of those needs.

In the absence of a governmental authority, in charge, HEIs are leading their own studies. Obviously they are able to only collect a limited amount of data. They also often face situations where enterprises’ representatives are not fully aware of all the required skills and competences for particular jobs.

A Lebanese Qualifications Framework (QF) is the other lacking component in Lebanon. Some projects have experimented with a suggested QF. However, there is no real structure to develop a national QF and follow up on it.

In summary, there is no observatory of the skills needed in the labour market and even less prospective studies about the evolution of those needs, and there is no national QF that defines the knowledge, skills and personal competences by level of study and for each sector. Awaiting the development of such structures, the Lebanese Higher Education Institutions have to develop alternative solutions. Examples of such solutions exist in different contexts.

AlmaLaurea Example
Consider the Italian experience of **AlmaLaurea**\textsuperscript{14}. A bottom up consortia of universities has been created to fill the gap and study the skills needed by the labour market. The idea is to rely on the perspective of graduates after entering the labour market. The AlmaLaurea model is based on three pillars:

- An annual survey of the graduates’ profile (\textit{internal effectiveness of the higher education institutions});

- An annual survey on the graduates’ employment condition at 1, 3 and 5 years after graduation (\textit{external effectiveness of the higher education institutions});

- An online database with more than 2.5 million CVs that forms a powerful tool aiming to improve the match between supply and demand for graduates.

The surveys’ results are used by the partner universities for specific reviews and quality assessment of the single degree courses. Moreover, some of the derived indicators (e.g. employment condition, satisfaction for the profile of studies) are transferred to the National Agency for the evaluation of University and Research (ANVUR).

**The HEIs role**

The determination of labour market needs in terms of skills and competencies is a compulsory step needed as it is shown in the following illustration. Awaiting the foundation of specialized body to take care of this, a universities’ consortium similar to the one in Italy can be defined to detect those needs and the corresponding dynamics.

In the industrialised countries, specialised agencies are responsible for establishing the National Qualification Framework (NQF) with a real collaboration and open dialogue between universities and between them and the other stakeholders. In the absence of a national body working on the Lebanese Qualification Framework (LQF), Higher Education Institutions have to find alternative solutions. They can collaborate in capacity building projects, funded by the European Union, as a palliative solution in anticipation for the formulation of LQF. These projects should include a maximum of the stakeholders, especially alumni and the employers. They can also refer to international systems for comprehending the concepts of skills/competencies, occupations and qualifications. Some of those systems are:

- The \textit{International Standard Classification of Occupations}\textsuperscript{15} (ISCO). It is a tool for organizing jobs into a clearly defined set of groups according to tasks and duties.

- The Arab Standard Classification of Occupations (ASCO).

- The \textit{European Skills, Competences, Qualifications, and Occupations}\textsuperscript{16} (ESCO). It is a Europe 2020 initiative. The DG Employment, Social Affairs and Inclusion
developed ESCO in collaboration with stakeholders and with the European Centre for the Development of Vocational Training (Cedefop). The ESCO three pillars are: Competences/Skills, Occupations and Qualifications.

![Figure 1. The Process](image)

In some universities a “technology watch” and “placement” offices monitor the market needs in term of jobs and competencies. This can form an additional solution for the Lebanese HEIs.

It is also possible to profit from the Internal Quality Assurance mechanisms to collect information about the needs in terms of skills and competences. This approach is being used in some higher education institutions. For this reason, the UNESCO Institute for Educational Planning (UNESCO-IIEP), Xiamen University and the Chinese Higher Education Evaluation Centre (HEEC) organised in 2016 a Policy Forum on “Quality and employability in Higher education: how can internal quality assurance contribute to Quality and employability in HE?”

Whatever are the tools used in the HEIs to monitor the needs in terms of skills and competences, developing the relations between the HEI and the enterprises & organisations on the workplace is crucial.

These relations facilitate for the HEIs the preparation of graduates with the competencies required to meet market needs. Moreover, the feedback of the alumni on the relevance of the academic programmes forms a precious element for the adjustment of the existing programmes or the creation of new ones. Stakeholders, employers and alumni should be directly involved in the design and redesign of study programmes.
2. Employability Skills integration

*Transversal and Vertical Competencies Classification*

According to what Baron stated: “if individuals want to remain employable... they too, have to think about what skills they should be working to develop” we believe that it is important to think which competencies will be in demand by the workplace in the next ten years. Moreover, there is a need to adopt a reflexive approach regarding how people are going to remain productive and attractive to employers through their working life.

To master the design or the redesign process, the experience taught us to divide the programme main competencies in **two principal categories**. These are the **general or transversal competencies** and the **specific or vertical competencies** related to the fields of specialty or the professional domain targeted by the programme.

The University **Instructional Designers** Team, in collaboration with the stakeholders, select the main six to seven competencies of the programme that are divided into sub-categories.

As it is shown in the illustration above, the list of the selected competencies of the programme are:

- listed competencies in the national professional repository when it exists, or
- some of the identified **required competencies** from the market survey.
Specific Employability Skills Identification

There are two main kinds of employability skills:

- the transversal competencies,

- the vertical competencies of the programme.

Some universities consider the whole six to ten main competencies of the concerned programme as employability skills, whereas others consider the employability skills as a specific sub-category of the competencies of the targeted programme.

The careers and employability service of Kent University listed the top 10 employability skills recommending their students to develop. They are as follows:

- Commercial awareness (or business acumen)
- Communication
- Teamwork
- Negotiation and persuasion
- Problem solving
- Leadership
- Organisation
- Perseverance and motivation
- Ability to work under pressure
- Confidence

3. Pedagogical Model Elaboration

Once the competencies to acquire defined, you must elaborate your pedagogical model to prepare the development of your programme based on it. For example, the adoption of a pedagogical model based on:

- semesters require a different approach than the annual one

- learners charge load (European Credits Transfer System, ECTS) requires a different approach than the face-to-face contact hours (American system);

The elaboration of the pedagogical model and its renewal require the creation of a matrix where its columns represent the teaching with information on: the semester hourly volumes, the name of the teachers, the description of the course, and the digital resources for example. A column must be dedicated to the learning outcomes. Two separate other columns shall be used to inform about critical learning:

- The teaching unit contributing to this specific critical learning
- The authentic situations of learning and evaluation which are: projects, case studies, internship, or others.

If you are interested in delivering the teaching digitally, you need to consider other supplementary elements as the following: What to read? What activities to do? And What to assess?

Surely, you may add other columns in your pedagogical model that you find relevant.

4. Programme Development
At this level you may start building the programme. This approach starts from the definition of the needed competences towards the definition of the programme and its constituents to assure that the identified competences are acquired at the output of the programme.

5. Programme Assessment
The previous part of the process should allow the design of a competency-based programme addressing employability. The Competency-based assessment requests from the learner to show evidence of his/her competencies.

It is recommended that learners should write down in an e-portfolio, like Mahara, the competencies that they have acquired and provide the evidence of their mastering level for each competency. The advantage of this method is the facilities offered to learners to capitalise on their acquired competencies in their natural progress throughout their learning experience.

Conclusion
Employment of graduate is a pressing social demand and pushes towards the study of employability. This document provides some references models and few definitions. It also points out some European Tempus projects in this field. An analysis of the current situation in Lebanon shows that no structure is assessing the needed competences for the labour market and even less the dynamics of this need. Several alternative approaches are suggested allowing the higher education institutions to cope the gap.

A short idealistic model is also suggested, where required competences are identified from the labour market needs. Based on these competences the building blocks of a programme are defined. This model must be considered as a reference model for two reasons. First, there are no precise competences defined from the labour market. Second, the graduates from university programmes are supposed to drive the labour market
towards new horizons and not simply satisfy some market needs at a certain point of time.

Throughout the document, we stressed on the communication and dialogue among all the stakeholders. This seems to be a crucial recommendation that will necessarily serve enhancing employability.

References
To go furthermore ...

Discover the AlmaLaurea Interuniversity Consortium in Italy
Established in 1994, the Consortium counts today 74 Universities and members. It is “supported and funded by the Universities that are part of it, by funds from the Ministry of University and Research (MIUR), by the companies and the bodies that use the services offered.”

Links to selection of works available on the web site of AlmaLaurea:

- 2017 Report on the Profile and Occupational status of graduates;
- 2016 Report on the Profile of Italian Graduates;
- 2016 Report on Graduates’ Employment Condition;
- Integration of different data collection techniques using the propensity score;
- Factors Contributing to Participation in Web-based Surveys among Italian University Graduates;
- Graduates’ employment and employability after the "Bologna Process" reform. Evidence from the Italian experience and methodological issues;
- Assessing selection patterns and wage differential of high-skilled migrants. Evidence from the AlmaLaurea dataset on Italian graduates working abroad;
- Over education among Italian graduates: do different measures actually diverge?
- Entrepreneurship and innovation: the role played by graduates;

Other Remarkable projects: DEFI and SEMSEM
The partners of these two European funded projects worked on the relation between HEIs and the Enterprises.

Tempus DEFI and Tempus SEMSEM.
If the DEFI project targeted the Engineering field, SEMSEM main objective represented a continuity of DEFI by looking on the Quality Internships for a better professional insertion because they believe that internship is one of the means of interaction between the University and the Enterprise. It is also an essential component of any professional training.

1 “Promoting employability through higher education,” Key Findings, ET 2020 country workshop, Brussels, February 2015, MHE2/2015, EC, DG EAC.
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