The Issue of HE Pedagogy in a Quality Assurance Process in The Light of 21th Century Challenges

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Outline

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1. Issue of pedagogy in the light of 21st Century challenges in HE and researches in neurosciences

1.1. Skills needed for the 21st Century

In his latest book, *21 Lessons for the 21st Century*, published in 2018, Yuval Harari lists the skills that are not only necessary but vital for the 21st Century: a century where the digital tsunami, as some call it, has brought about radical cultural, societal, ethical, and economic transformations. The risk for those who would be deprived of these skills is to become "useless", "insignificant", says Harari. It is, therefore, "insignificance" rather than exploitation that lies in wait. These skills are not limited to the technical domain but are also reflective, metacognitive, relational, and psychological.

Those that are most mentioned are the 4 "c's":

- **Communication**, which includes another "c" that stands for **citizenship** and is associated with **empathy**, a notion which, according to Boris Cyrulnik, needs to be dusted if we are to live together in a shared world. Live together as brothers so as not to perish together as fools, as Martin Luther King said. Communication in a world for which representative democracy is no longer sufficient, in a world that requires more direct participation – though it expresses it in ways that are sometimes violent.

- **Critical thinking.** Indeed, it is necessary to find a compromise between trust in what others say and vigilance towards what is received, neither permanent suspicion nor submission. Our brains are biologically wired to test hypotheses. In a context where the fabrication of lies (infox) prospers and can determine strategic political, economic, and societal choices, such as Brexit, it is imperative to be able to discern between falsehood and truth, to verify, to analyze what is presented to us.

- **Creativity** is the third "c", **innovation** for progress, inventiveness to better people's lives. We talk now about a *creative economy* and not just a *knowledge economy*.

- **Collaboration.** If *"new technologies condemn us to be intelligent,"* as the philosopher Michel Serres says, it is clear that we are more intelligent together than alone. Our intelligences strengthen each other, confirming this statement by Saint Exupéry: *"If I differ from you, far from hurting you, I'm improving you."*. The effectiveness of networks and working communities is recognized in the *knowledge economy*. This *alchemy of synergy*[1] strengthens creativity. The *knowledge economy* is, therefore, strongly linked to the *creative economy*. What others do or have accomplished is a basis for moving forward. A prominent American university offers its students the work of their predecessors to push them to go even further, and it also develops collective spaces, a sort of ecosystem for cooperative learning and innovation.

- The complexity of problems requires the implementation of **collective and connective** intelligence, facilitated by the *"connection revolution"* that favors the *"optimized and multiplied combination of millions of human intelligences"*. In the *knowledge economy*, success does not come only from isolated individuals but from networks and communities of exchange.

- In this context, I touch upon the **interdisciplinarity**, the **multidisciplinarity**, and the **conceptual and global thought** that are needed in a world where challenges, problems, and solutions cannot be considered separately.

- In the context of a plethora of information, it will be necessary to be able to **distinguish the important from the insignificant**, to **extract meaning**, to associate the many bits of information to an **overall vision**.

- **Entrepreneurship.** Being an entrepreneur and an intrapreneur, meaning not only a business creator but a source of proposal and initiative within an institution. In order to succeed, it is essential to accept error and failure as part of the process, to be perseverant and to bounce back having learned a lesson from each failure. *"One must learn to fail in good humor (…) To think is to go from one mistake to another,"* says the philosopher Alain. Our brains learn by revising a mistake, by exploring, by testing and refining hypotheses. The brain's functioning is slowed down

if it is focused on the fear of making a mistake, a fear that inhibits thought and creativity.

- The ability to **solve problems** that are becoming more complex, but also the ability to **ask questions**, new and unexpected questions, triggering new answers. Developing the *culture of asking questions*, the **curiosity** that evolution has biologically offered us for our survival and that pushes us to leave our comfort zones for new discoveries and new learnings.

- In this world that is changing at such a rapid pace and in which everything is possible, how can one orient oneself without any **ethical** foundations, with no internal compass, with no benchmark? How to orient oneself?

- The coming period's salient feature being *"discontinuity," "the only constant"* being change, *"you can hardly afford stability"*, says Harari. *"In order to keep up with the world of 2050, you will need not merely to invent new ideas and products – you will above all need to reinvent yourself again and again"*, he says. Thus, life will no longer be divided into learning time followed by working time. **Mental flexibility** and **adaptability**, possible thanks to the immense plasticity of our brains and essential for the survival of the species, the ability to **learn to learn** and to **educate oneself throughout life**, are unavoidable. Being *learners*, as individuals and as institutions.

Harari mentions two skills, rarely formulated in these terms:

- He considers that in a context of instability and rapid change, where we will have to deal with unfamiliar situations and therefore, *"immense levels of stress,"* we will need *"**great reserves of emotional balance**". "To live is to be delightfully worried",* says writer Kamel Daoud.

- In the era of *"hacking humans"*, where algorithms take care of everything, **knowing oneself**, knowing *who I am*, *"will be a more urgent and complicated question than ever before",* says Harari. This advice *"Know yourself (…) was never more urgent than in the 21st Century",* he claims.

These skills go well beyond the obviously indispensable disciplinary skills. **They question in depth our teaching practices,** posing from the outset the need to train teachers, the *"product of the old educational system"* (Harari Y., 2018).

1.2. Societal issues of developing these skills

We need to develop the skills that we have just listed among all students. **Inclusive quality of education, meaning quality for everyone, is no longer idealistic but imperative.** Our survival depends on it. Indeed, besides the resulting deep personal wound, to feel *insignificant* because

one is *useless,* threatens social peace. **The gap between those who are equipped with these skills, this "new intellectual aristocracy" and others could be explosive.** This "new form of apartheid" generates anxiety and despair. Its consequences are disastrous for all: the rise of populism and the extremism, isolationism, multiple and violent crises. For example, the choice of the British, the demonstrations in France of the *Gilets jaunes*, the populist regimes in many European countries, the despair of the Arab youth, and the decline in life expectancy in the United States where marginalized social classes die a slow death by alcoholism or drugs, by anxiety, toxic, deadly, lethal frustrations.

Implementing pedagogical practices that develop these skills is, therefore, far from trivial. This is why **educational issues are currently at the heart of the concerns and investments of many countries and international organizations** such as the World Bank, the OECD and others, which were initially concerned by economic issues. **These skills are taken into account in international assessments**, such as PISA. **They rank first in hiring criteria** and in **academic standards defining the quality of a program**.

1.3. Impact of pedagogical approaches on the development of the 21st Century according to neurosciences

Educational research has proven the impact of pedagogical approaches, including active pedagogies, on the quality of student learning in general and the development of 21th Century skills in particular.

Research in neurosciences explain why and confirms that certain types of pedagogical approaches, including active pedagogies, promote the development of the skills we have mentioned.

Neurosciences researchers have identified the **specificities of the human brain**, specificities with which **evolution endowed human beings for their survival**:

• Has a huge plasticity
• Learns by trial and error. By making hypothesis then confirming, infirming, modifying or refining them (*brain is a statistician*)
• Is curious
• Anticipates
• Analyses
• Is capable of internal dialogue
• Explores
• Cooperates
• Invents
• Has a great capacity of adaptability

- Has a great power of association
- Is sensitive to others intentions and expectations (is equipped with *mirror neurons*)
- Needs interaction and communication
- Needs to engage itself (pillar of learning)

We can deduct from this **that learning is a process which is**:
- **Active**
- **Interactive**
- **Cooperative**

Certain learning conditions must therefore be ensured:
- Emotional Security:
  - Positive expectations
  - Motivation
  - Encouragements
  - The right to error
  - Positive identification with the teacher

These conditions will facilitate the possibility to explore, interact and cooperate.

- Active and Cooperative pedagogical approaches
  - Flipped classrooms
  - Brain storming
  - Problem based approaches

- Case studies
- Simulation
- Projects
- Group work
- Integrative and contextualized modalities for evaluation
- Etc.
- Open program design
  - Gateways between courses and programs, interdisciplinary and integrative approaches in program design and assessment modalities
  - Adaptive learning and personalized itineraries
  - Teamwork among faculty
  - Cooperative working spaces

2. Frameworks promoting pedagogical practices

2.1. National level

The *Trends 2018* (EUA, 2018) document of the European University Association confirms the **impact of a national strategy on that of universities and its "driving role" in the development of pedagogical practices**. 74% of institutions surveyed by the EUA recognize the impact of national policies on the quality of education, provided that they be neither coercive nor bureaucratic. **To promote**

without imposing or bureaucratizing is the challenge that needs to be met.

Among the **incentive measures** identified in the afore-mentioned document of the European University Association are the following:

- The **legal recognition of pedagogical skills as constitutive of the higher education teaching profession.** The 1997 UNESCO and ILO International Recommendation Concerning the Status of Higher Education Teaching Personnel reinforces this vision.

- **Quality assurance processes**, because they place student's learning at the center of their concerns through the concept of *expected learning outcomes*.

2.2. Institutional level

The following elements are great levers at the institutional level:

- An institutional will

- A vision and an academic strategy and the awareness that pedagogical issues are central and as important as disciplinary research

- A specific entity for teacher and institutional training and coaching

- A functioning as a learning organization that operates in a participatory and networking approach.
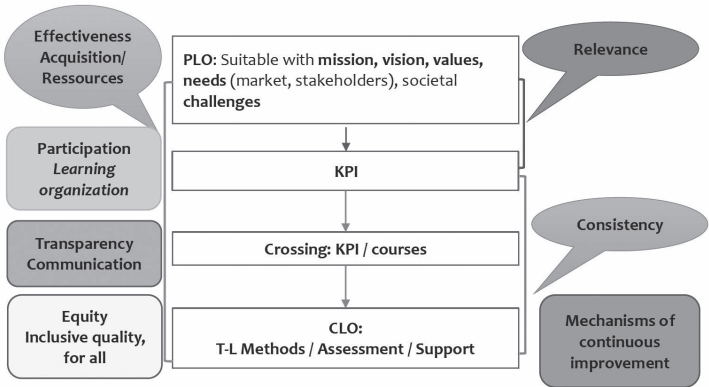
- Platforms for pooling and capitalization of good pedagogical practices and platforms for pedagogical debate
- A research policy encouraging pedagogical research (SOTEL)
- A human resources policy valorizing pedagogical practices and researches and the participation in academic projects

3. Integration of pedagogical issues in the QA at Saint Joseph of Beirut

3.1. Implementation of the educational alignment project

In Saint Joseph of Beirut, we started by making our university community aware of the quality criterias of academic programs and courses, in particular that of consistency. We then asked each institution and teacher to revisit its program or course in the light of these criteria.

Quality criterias of an academic program

Effectiveness Acquisition/ Ressources	**PLO:** Suitable with **mission, vision, values, needs** (market, stakeholders), societal **challenges**	**Relevance**
Participation *Learning organization*	**KPI**	
Transparency Communication	**Crossing: KPI / courses**	**Consistency**
Equity Inclusive quality, for all	**CLO:** T-L Methods / Assessment / Support	**Mechanisms of continuous improvement**

Crossover matrix between KPI and courses

	KPI A1	KPI A2	KPI A3	KPI B1	KPI B2	KPI C1	KPI C2	KPI C3...
UE 1	√		√					
UE 2	√	√						√
UE 3		√	√					
UE 4	√			√				
UE 5					√			
UE 6				√				
UE 7						√	√	
UE 8					√	√		√
UE ...								

Equilibrium between KPI

Coverage of KPI by the UE

UE without connection with KPI

Pedagogical consistency at a course level
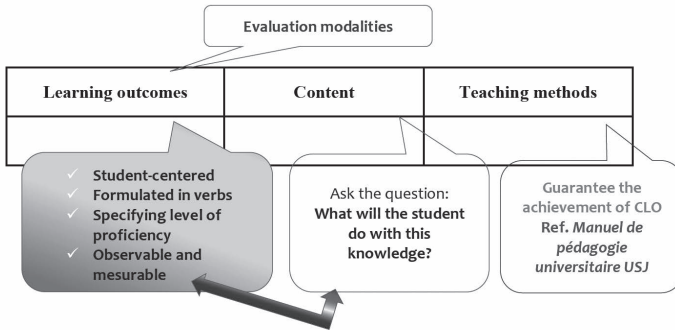
3.2. Structure and Support

We proceeded in a **progressive, participatory manner, networking** and **promoting good practices,** showing always the **added value** of these new pedagogical approaches.

We have created an **entity at the central level** "*University Pedagogy Mission*" www.usj.edu.lb/mpu, set up a pedagogical committee in each faculty and brought together the representatives of these committees in a network called the University pedagogy network

Among the **main activities** of this entity:

• Pedagogical training of teachers

• Coaching of teachers and institutions

- Production of resources and guides, including the *University Teaching Manual* www.usj.edu.lb/mpu/manuel
- Mutualisation of good practices of the USJ through exchange hubs and discussion panels
- Dissemination of educational resources through our website www.usj.edu.lb/mpu
- Organization of educational debates