Higher Education in Middle East: Where to?
Recognition, Internationalisation,
Strategies and Challenges

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Quality and relevance in higher education have become a benchmark for recognition in capacity building for Arab countries to excel in an interdependent competitive marketplace of the world economy.

Mobility of students, recognition of degrees & certificates and internationalisation will never be achieved without a quality of inputs – processes – outputs of higher education. Market forces for quality of graduates to fuel the knowledge economy through innovation, creativity and entrepreneurship become crucial in brain-intensive industrialization, and no compromise for Arab countries, particularly Jordan to undermine, since human resources form the human capital, the main force of knowledge economy.
• **The Arab World is spending** 5.4% of its GDP on public and private education as compared to:
  • 5% of industrialized countries.
  • 3.8% of developing countries.

• **Tertiary education students in the Arab regain represent** 25% of eligible population, higher than other developing countries. While total higher education institutions in Turkey is 193, including community colleges-associate 2 yrs, enrollment in higher education in Turkey is 3.7 million (including associates), University enrollment is 3.1 million (excluding associates), Turkey achieved 53% access to higher education of age group, taught by 105,427 academic staff with 1:18 staff student-ratio, approaching OECD of 1:15. However, Turkey needs 50,000 additional academic staff.

• **Quality and relevance** of delivery of higher education in the Arab region is low and not competitive. It lacks creativity, innovation, and entrepreneurship. It is reflected in the turn-key technological projects, still going on in the Arab region, so far business as usual. Endogenous capacity in science and technology is weak.
• **Expenditure average**, on R&D has not risen above 0.4% of GDP in the Arab region as compared to world average of 1.7%. In Turkey is 0.95% and targeting 3% by 2023: R&D personnel is 113,000 and targeting 300,000 in 2023.

Arab private sector in R&D, is almost absent and thrive on outputs done by others. Turkish private expenditure on R&D is 0.45% of GDP.

• **Arab scientific papers total** 1.5% of world, and 90% of it is done by public sector. While for Turkey, the number is 28154 in cited journals (Fig. 1, 2). Turkey has increased scientific output 8 times higher than the world average, only trailing Iran (11 times) and S. Korea (10 times) (Fig. 3).

• **Despite impressive scientific** advancement, Turkey did not achieve a good performance in technology output and inventions (Table 1).
Fig. 1: HIGHER EDUCATION IN MIDDLE EAST: Turkey research output

An increase in the number of peer-reviewed cited publications by 50% in Turkey.

Fig. 2: SCIENTIFIC PUBLICATIONS Of Turkey as compared to other countries.

Fig. 3: Publication output of the five prolific Arabian, Persian & Turkish Middle East.

Turkey and Iran, produced more than 1,000 papers annually. Egypt, Saudi Arabia and Jordan have a substantial output but not growing at the same rate as Iran and Turkey.

Weak relation between scientific papers and patents output of Turkey.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>US</td>
<td>275,000</td>
</tr>
<tr>
<td>China</td>
<td>120,000</td>
</tr>
<tr>
<td>Japan</td>
<td>65,000</td>
</tr>
<tr>
<td>Korea</td>
<td>29,500</td>
</tr>
<tr>
<td>Turkey</td>
<td>18,000</td>
</tr>
<tr>
<td>Switzerland</td>
<td>12,000</td>
</tr>
<tr>
<td>Israel</td>
<td>9,000</td>
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Despite impressive progress in scientific output, Turkey did not show a similar performance in technological output and inventions.

Turkey has a problem, as the Arab world, in converting scientific research output into technological advancement (Table 2).

**Despite the above, Turkey has shown good performance in:**

- Research Funds: increased by 23% in 2011.
- R&D support by TÜBİTAK increased 25-fold in ten years (2000-2009).
- Techno parks: number of techno parks reached to 39.
- Development Funds increased by 50% to 150%.
- Budget of newly established universities increased by 50%.

*Source: Özcan, The Council of Higher Education (CoHE).*
Turkey has a problem converting its scientific output into technological advancement and inventions.


<table>
<thead>
<tr>
<th>Country</th>
<th>Applications per 1000 Papers</th>
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<tbody>
<tr>
<td>Japan</td>
<td>1,268</td>
</tr>
<tr>
<td>US</td>
<td>842</td>
</tr>
<tr>
<td>Korea</td>
<td>799</td>
</tr>
<tr>
<td>Israel</td>
<td>506</td>
</tr>
<tr>
<td>Switzerland</td>
<td>279</td>
</tr>
<tr>
<td>China</td>
<td>37</td>
</tr>
<tr>
<td>Turkey</td>
<td>5</td>
</tr>
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</table>

Turkey runs a major risk of being rich in science and poor in technology!

I. **Recognition:**

Students started to look for quality and relevant education. Simply, a university degree will not find them a job unless it is competitive.

With life-long education and informal education, new system of recognition and certification is required outside the higher education degree context.

There is a **changing landscape** of higher education in the Arab world, where **mobility** of students used to be traditionally to Egypt, Lebanon, Syria, and Iraq, but nowadays has shifted to Gulf states particularly, Emirates, Qatar, Bahrain in addition to Jordan.

Although Jordan has created 30 public and private universities accommodating 290,000 students, mobility of Jordanian students abroad still one of the highest among Arab countries, of cohort students.
1. Changing Landscape:

- Global tertiary enrollment reached 170 million in 2009 (UNESCO institute for statistics), by 2025 it will be expected to reach 200 million,
- Representing 5% annual growth. China, India, US & Russia have a combined share of 45% of total world tertiary enrollment.
- Other emerging economies as:
  - Brazil (6.2 million),
  - Indonesia (4.9 million),
  - Iran (3.4 million),
  - South Korea (3.2 million),
  - Turkey (3.1 million),
- The Arab region stands at 3.2 million tertiary enrollment.
Fig. 4: Tertiary enrolment growth (2002–2009, 000’s)

Source: UNESCO, Oxford Economics
2. **Students mobility:**

- Forcasts of **OUTBOUND** number of students is lead by:
  - China, (585,000),
  - India (296,000)
  - South Korea (134,000),
  - followed by Nigeria, Malaysia, Nepal, Pakistan, Saudia Arabia & Turkey.

- Global students studying aboard is:
  - rising in 2015: 5.5 million,
  - expected in 2025 to reach 8 million (according to OECD).

- **INBOUND** international students flow toward the U.S 600,000, UK 380,000, Australia 260,000, Germany 255,000 France 250,000, Japan 130,000, Turkey is only 24,500. It is expected that China, Singapore, Malaysia and some Gulf States will be the fastest growing study destinations for International students.
Fig 5: Global Tertiary OUTBOUND Mobility Ratio by Origin Market (2009)

Source: UNESCO, OECD, Oxford Economics
Fig 6: Global Tertiary INBOUND Mobility Ratio by Destination Market (2009)

Source: UNESCO, Oxford Economics
Fig 7: Global INBOUND and OUTBOUND Mobile Tertiary Students (2009) (ooo’s)

Source: UNESCO, Oxford Economics
In 2008;
* 6 countries host more than 50% of international students worldwide.
* Turkish HEIs host only 0.7% of all international students and this comprise about 0.8% of all HE enrollments (excluding students of Open Education (1.557.217) and Erasmus Exchange Programme (10.388)).

<table>
<thead>
<tr>
<th>Country</th>
<th>#of Foreign Students</th>
<th>Share (%)</th>
<th>% of Total Student Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>624.000</td>
<td>18.9</td>
<td>3.0</td>
</tr>
<tr>
<td>UK</td>
<td>336.000</td>
<td>10.1</td>
<td>15.0</td>
</tr>
<tr>
<td>Germany</td>
<td>246.000</td>
<td>7.3</td>
<td>12.4</td>
</tr>
<tr>
<td>France</td>
<td>243.000</td>
<td>7.5</td>
<td>11.2</td>
</tr>
<tr>
<td>Australia</td>
<td>231.000</td>
<td>7.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Japan</td>
<td>127.000</td>
<td>3.8</td>
<td>-</td>
</tr>
<tr>
<td>Turkey</td>
<td>24.551</td>
<td>0.7</td>
<td>0.8</td>
</tr>
</tbody>
</table>


The flow of international students will be motivated by:

a. Democracy & stability of target countries.
b. Flow of students from high to low tuition fees.
c. Economy and quality of life.
d. Quality & relevance of education.
e. Adoption of latest trends in technology of education.
f. University Website; 77% responded that the university website made the difference in their perception in joining institution.
g. Digital Strategy attracting international students: e-mails, e-learning online & social media to communicate, smart classrooms & smart campuses.
3. What to do to expand recognition:

1. **Access to higher education** should be **merit – based**, to assure competitiveness and equal opportunity, and building excellence.

2. **Scholarship**, should be built on excellence.

3. **Sustainability** of financing higher education.

4. **Abolishing Quotas for lower grader**, than their peers.

5. **Abolishing Quotas for limiting international** students and professors.

6. **Scholarly Graduates**, to be nurtured by pursing their higher education.

7. **Standardization and quality assurance**.

8. **Accreditation of academic programs**.

9. **An effective website**, to reflect quality of research, teaching, outreach programs.
3. What to do to expand recognition: continue:

10. **Homepage**: can make or break assessment decision.

11. **Blended learning**: online, e-learning, virtual, lectures from Star universities.

12. **Flipped classroom**: new pedagogical approach overlaps blended Learning, problem-solving.

13. **Output of peer reviewed research papers**: patents, citations, awards.
Internationalisation:

Standardization has been prompted by European accreditation, transfer of credits study programs and mobility of students across borders (the Bologna process). Turkey joined the Bologna Process in 2001. It brings quality assurance in higher education, through curriculum development and assessment of teaching-learning process.
Internationalisation: 

Internationalisation has a profound effect on the political, economic and cultural life of emerging economies. It is designed to promote international mobility and achieve intercultural skills. It aims at compatibility of degrees, transfer of teaching credits and educational achievement, and the internationalisation of the curriculum to ensure competitiveness of both institutions and graduates. By 2025 eight million is expected to study abroad, world wide.

Among the 193 higher education institutions, there are 72,178 international students in Turkey. Among 184 Turkish higher institutions, 164 universities signed Erasmus charter for higher education. Erasmus students mobility in Turkey is shown in Fig. 8.
Fig. 8: Erasmus Student Mobility in Turkey (2004 – 2014)

Source: Hasan Mandal, Global Trends Response from Turkish Higher Education Ecosystem, 2015.
Table 4: *Mevlana Students and academic staff exchange program in Turkey has been successful in internalization*

More than 1,000 Mevlana Protocols signed:
- 6 Continent
- 56 Different Countries

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Incoming Student</th>
<th>Outgoing Student</th>
<th>Incoming Academic Staff</th>
<th>Outgoing Academic Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>319</td>
<td>126</td>
<td>131</td>
<td>316</td>
</tr>
<tr>
<td>2014-2015</td>
<td>1611</td>
<td>1364</td>
<td>1132</td>
<td>1985</td>
</tr>
</tbody>
</table>

Source: Hasan Mandal, *Global Trends Response from Turkish Higher Education Ecosystem, 2015*. 
How to promote internationalisation:

1. **Language center at the university** is an important and effective setup for internationalisation to attract students from abroad.

2. **Exchange of students** will enrich the learning process by exposing students to other cultures.

3. **Collaborative research partnership**; nationals who studied abroad tend to maintain links to former colleagues.

4. **Visiting** professors and joint graduate programs i.e. joint master program in English translation, 1 + 1 UOP with Leeds university, i.e. joint cancer research of UOP with AUB and biological chemical research center at university of Karachi. i.e. joint cancer research group between UOP and Imperial College, London.

5. **Joining** international awards as IT students from (UOP) winning the Microsoft award in N.Y.C.

- **UOP** – University of Petra
- **AUB** – American University of Beirut
UOP students with Bill Gates, receiving Microsoft awards. N.Y.C, 2011.

Mohammad L. Azzam
Follow · January 27, 2012 ·

On a side event during the World Economic Forum, three people and I had a private meeting with Bill Gates, in this photo, I am showing Bill a video of Horizon by OaSys in action and getting valuable feedback from him. — with Bill Gates.
III. **Strategy and Challenges:**

1. **Career development**, where co-op training and graduation projects become crucial for career development. Training should become an integral part of the curriculum. Graduation projects allow students to interact with real life through innovative projects. Spending one year abroad as is done by the Jordanian-German University is one successful example in broadening the horizon of graduates.

2. **Accelerate R&D in collaboration** with others to widen the international profile joint research, (Scopus, Thomson Reuters) peer reviewed journals, patents, links with industry.

3. **Accreditation, standardization and ranking**, the university should have a strategy toward national and international accreditation and ranking. Quality and relevance should prevail on all its academic programs.
III. Strategy and Challenges: continue

4. **Introduce partnership** in research and teaching with star universities at the national and international levels. Consortium on graduate programs would provide the critical mass and strengthen the research and teaching of master and Ph.D. candidates. Introduce 1 + 1 in master program and 2 + 1 in Ph.D. program. Network with other institutions locally and internationally.

5. **Financing higher education** should be built on pay-cost of an individual student, students funds should provide scholarship for scholastic excellence and needy students (partial or total), who were admitted on merits and cannot afford paying tuitions.

6. **Strengthen autonomy and accountability** of the university by keeping it away of political and economical pressure groups so as to be maintained on merits. Support of public universities should be based on performance of teaching, research and technology development, in addition to sound efficient management and governance of financial and human resources (**Fig. 9**). Autonomy and decentralization are essential for int’l accountability.
The Magna Charta Observatory principle of the university “to meet the needs of the world around it, its research and teaching must be morally and intellectually independent of all political and economic power” institutional autonomy of the university in terms of both academic freedom and financial issues is the most crucial requirement for its success, innovation, performance and effective service.

III. Strategy and Challenges: continue

7. **Create good management and governance** of the university system and processes, to reduce waste and increase efficiency in utilizing the human and financial resources. Create a trimmed efficient dynamic university, and lay off extra weight.

8. **Access to higher education** should be on merits, abolish degrading quotas in university admission.

9. **Create an inducing environment** for research innovation and entrepreneurship.

10. **Introduce blended** learning, e-learning and on-line learning life-long education. There is a need to train faculty members on technology of education utilizing new pedagogical multimedia tools.

11. **Ease regulation particularly** residence regulation for international staff & students.

12. **Create consortium** to reduce cost and create the critical mass at the national and international levels.
Fig. 10: Top UK collaborative research partners (2010)

Source: Thomson Reuters Web of Knowledge data, extracted December 2011
Thank you,