A BRIEF HISTORY OF CIVIL ENGINEERING EDUCATION IN TURKEY

Tugrul Tankut
“History” or “reollections of an elderly professor”? Not very clear.

Please take it as the personal views and nostalgia of a critical old fellow.
OUTLINE

- Developments in the Educational System
- Developments in the State of Civil Engineering
- Reasons Behind
- Concluding Remark
DEVELOPMENTS IN THE EDUCATIONAL SYSTEM
Late 40’s and early 50’s,

- Two university departments; İstanbul Technical Univ and Robert College.
- Two technical schools of engineering; Maçka and Yıldız.
CIVIL ENGINEERING EDUCATION

Late 40’s and early 50’s,

- İstanbul Technical University – Central European 5-year system - MSc equiv.
- Robert College – American 4+2 system.
- Maçka and Yıldız – 4-year system (intermediate level education).
CIVIL ENGINEERING EDUCATION

Late 50’s,

- **Middle East Technical University** – American 4+2 system. Rapidly developed, established itself as a successful univ.

- **Karadeniz Technical University** – Central European 5-year system - MSc equiv. Slowly developed, established in 90’s
CIVIL ENGINEERING EDUCATION

Early 70’s,

- 3 or 4 private schools of engineering (so called academies) – 4-year system (significantly inferior education).

- Two programmes; regular & evening.
CIVIL ENGINEERING EDUCATION

Early 80’s (Military regime),

- Higher Education Council – Standardised universities
- Adoption of 4+2 system in all universities
- Conversion of academies (private schools of engineering) into universities
- Compulsory service for the faculty
CIVIL ENGINEERING EDUCATION

Late 80’s, early 90’s,

- A few foundation (private) universities – Top quality education in one or two
- A few countryside universities, all with departments of civil engineering (shortage of faculty and facilities)
CIVIL ENGINEERING EDUCATION

Since the beginning of the new millennium,

- Increase in the number of foundation (commercial) universities. Acceptable education in a few, inferior edu in most.
- Increase in the number of countryside universities, civil engineering in almost all. Inferior education in most of them.
DEVELOPMENTS IN THE STATE OF CIVIL ENGINEERING
IN A NUTSHELL

In the good old days (60’s & 70’s),

- We had very good civil engineers.
- We needed intermediate level technical personnel for routine work.
- Institutions were needed to educate intermediate level personnel.
IN A NUTSHELL

Today,

- We are producing only intermediate level personnel (title doesn’t matter).
- Some of them are becoming engineers (their personal effort & capacity).
- Institutions are needed to educate genuine civil engineers.
Years following the Second World War,

- Europe was to be reconstructed.
- Initial stage of industrialisation in Turkey. Infrastructure needed to be constructed.
- Great demand for civil engineers.
- CE was the most favourable profession. (Girls were dying to marry a CivEng)
Years following the Second World War,

- Civil engineers were very well paid.
- Best students studied civil engineering.
- Only two CivEng departments; ITU & RC were giving sound education.
- Resulting CEng practice was successful.
In the following four decades,

- CEng edu quality gradually deteriorated.
- Stu number increased, quality decreased.
- Salary and favour for CE decreased. 
  (Girls are not interested in CEs any more)
- It is a vicious circle: 
  Poor eng → less favour → poorer stud → poorer eng → even less favour → so on
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<th>50’s</th>
<th>80’s</th>
<th>Today</th>
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<tr>
<td>Population</td>
<td>~20M</td>
<td>~45M</td>
<td>~70M</td>
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<tr>
<td>CE Dept’s</td>
<td>4</td>
<td>~15</td>
<td>&gt;100</td>
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<tr>
<td>Grads/year</td>
<td>~100</td>
<td>~500</td>
<td>~5000</td>
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<tr>
<td>Civil engineers</td>
<td>~2Th</td>
<td>~10Th</td>
<td>&gt;80Th</td>
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Almost linear population increase versus exponential increase of civil engineers.

Unavoidable devaluation and degradation of civil engineering.

“Demand and supply” rule is universal!
REASONS BEHIND
REASONS BEHIND

Universal factors

- Rise of the computer and the information and communication technologies and
- Unbelievable development of the Internet

have been elaborated in an earlier talk. I will leave them aside.
REASONS BEHIND

Local factors

- Multiple choice tests (university entrance exam followed by others at every level) effected students. I will leave it aside.

- Populist policies of education is the main reason behind the deterioration explained.
POPULIST POLICIES

- Society has a peculiar passion for a university degree, especially for engineering.

- The more easily it is acquired, the better. Quality and content do not matter. So,

- Populist policies in that direction easily convert into votes.

So...
POPULIST POLICIES

- Unplanned universities, with CE depts were opened; are still being opened.

- Student quota (number of students, the department has to accept) was doubled.

- Evening programmes were introduced.

- Curricula were reduced significantly.
POPULIST POLICIES

- Success criteria were much simplified.
- Academic regulations were released.
- Unsuccessful students cannot be dismissed any more. Whoever gets in, goes out with a diploma sooner or later.
CONCLUDING REMARK
Prof. Manoliu’s questionnaire:

A sufficient number of civil engineers?

I replied:

Too many sub-standard civil engineers & too few good quality ones in Turkey.

And that was not a joke!
THANKS

for your attention...
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