

**ECCE 54th General Assembly
SC Education & Training
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A BRIEF HISTORY OF CIVIL ENGINEERING EDUCATION IN TURKEY

Tugrul Tankut



AN INITIAL REMARK

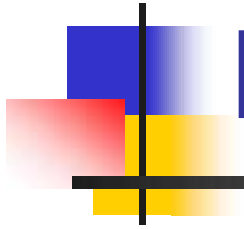
- “History” or “recollections of an elderly professor” ? Not very clear.
- Please take it as the personal views and nostalgia of a critical old fellow.



OUTLINE

- Developments in the Educational System
- Developments in the State of Civil Engineering
- Reasons Behind
- Concluding Remark

DEVELOPMENTS IN THE EDUCATIONAL SYSTEM





CIVIL ENGINEERING EDUCATION

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
- Compulsary 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)

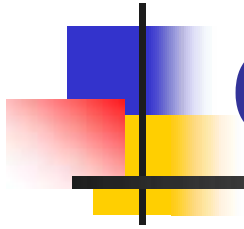


CIVIL ENGINEERING EDUCATION

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.



REVIEW - HISTORICAL

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)



REVIEW - HISTORICAL

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.



REVIEW - HISTORICAL

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



REVIEW - STATISTICAL

	<u>50's</u>	<u>80's</u>	<u>Today</u>
Population	~20M	~45M	~70M
CE Dept's	4	~15	>100
Grads/year	~100	~500	~5000
Civil engineers	~2Th	~10Th	>80Th



REVIEW - STATISTICAL

- 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 univ 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



CONCLUDING REMARK

Prof. Manoliu's questionnaire:

- A sufficient number of civil engineers?

I replied:

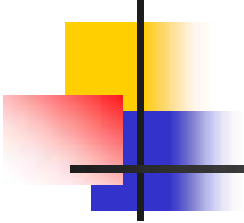
- Too many sub-standard civil engineers & too few good quality ones in Turkey.

And that was not a joke !



THANKS

for your attention...



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