

**Do professional, semi-professional,
and non-professional study program
graduates have different levels of
competencies?**



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Introduction

- ◆ Gaps between competencies of higher education graduates at graduation and required at work.
- ◆ The employers want graduates who are ready/competent for their responsibilities at work
- ◆ Do all graduates from all study programs experience difficulties in meeting employers' demands of graduates with competencies?

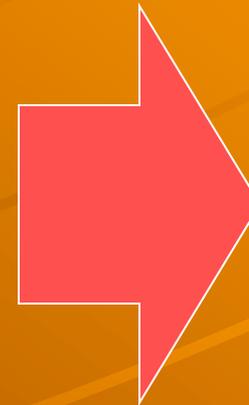
What did Noam Chomsky say about competencies and performance?

- ◆ the concept of generative grammar as theory of linguistic competency
- ◆ Competencies: deep and surface structures
- ◆ The deep dictates the surface
- ◆ Deep structure is the 'competency' and surface structure is the 'performance'.

Curriculum of a study program should include competencies as follows

(Ministerial decree No. 045/U/2002):

- ◆ foundation of personalities;
- ◆ mastery of science and skills;
- ◆ ability to work;
- ◆ attitude and conduct at work according to the level of expertise based on the mastery of science and skills; and
- ◆ understanding of the norms in the community where he/she works."

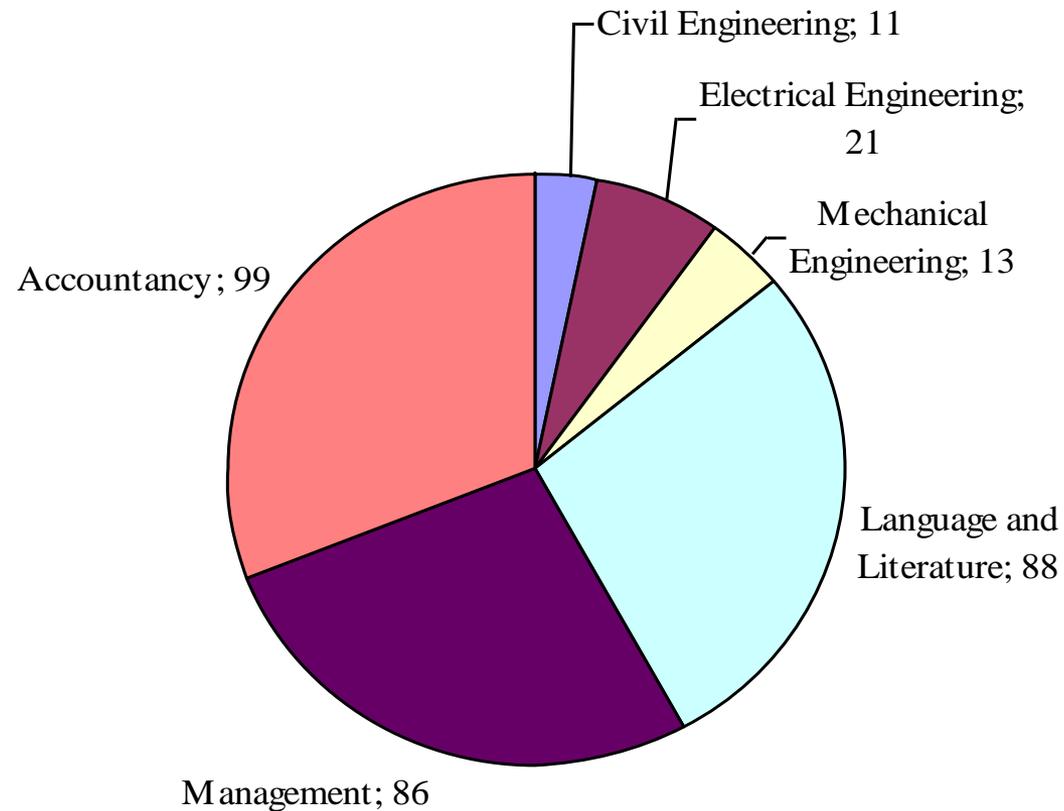


- ◆ Core competencies
- ◆ Supporting competencies
- ◆ Other competencies related to core competencies

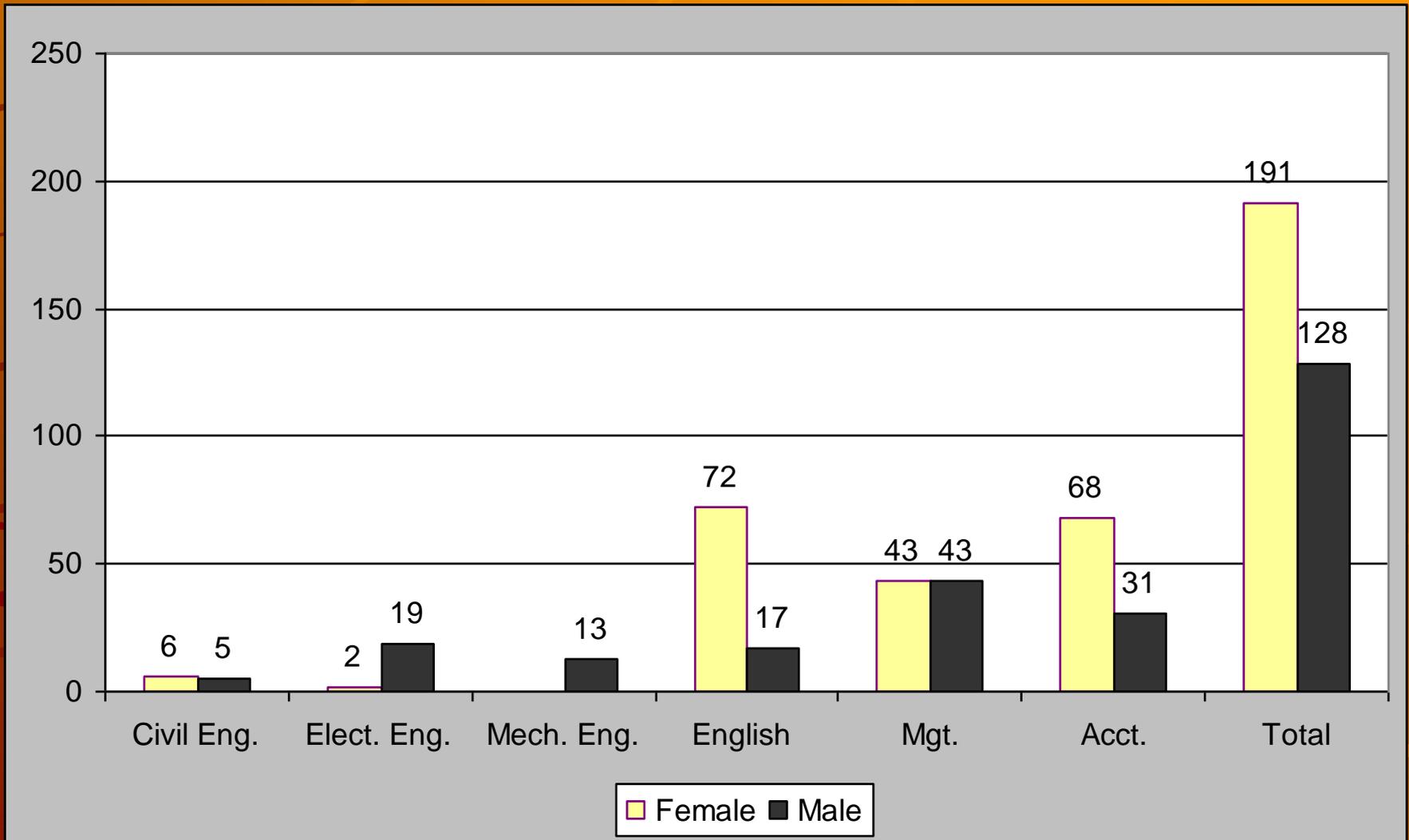
Population and response rate:

Faculties Study programs	Target population	Traced respondents	Returned	
			Num.	(%)
Professional	302	120	45	14%
Civil Engineering	82	26	11	3%
Electrical Engineering	112	60	21	7%
Mechanical Engineering	108	34	13	4%
Semi-professional	911	498	185	58%
Management	367	232	86	27%
Accounting	544	266	99	31%
Nonprofessional				
English	250	240	88	28%
Total	1545	859	319	100%

Respondents by study programs



Respondents by study programs; by gender



Employers' Recruitment Criteria by Field of Study (%)

Criteria	Study Program						Total
	CE	EE	ME	LL	Mgt	Acc	
Computer operation	100	86	92	94	96	98	95
Personality	100	95	85	95	89	96	93
English Proficiency	82	86	92	99	84	81	88
Grades/GPA	91	81	85	81	87	87	85
Reputation of institution	82	76	92	74	77	89	81
Study programs	82	86	85	73	71	78	76
Specialization	82	81	85	75	77	71	75
Work experience during studies	55	57	77	65	66	63	64
Other foreign language proficiency	55	75	62	69	65	57	64
Reference from third party	45	38	38	58	56	62	56
Overseas experience	36	29	46	44	34	29	35

Facts about UKI graduates in general:

- ◆ 47% EE and 38% ME grads: their fields of study did not matter very much to their work.
- ◆ 52.7% worked as regular (marketing, purchasing, administrative, etc) employees
- ◆ 74%: *Sarjana* degree was the most appropriate level for the jobs
- ◆ 80% English grads and 78% accounting grads believed that their level of education fits for the work
- ◆ 19% believed that diploma (non-degree) or lower degree grads were the most fitting for their jobs

Competencies:

- ◆ Knowledge

- ◆ Personal Attributes/personal competencies

- ◆ Interpersonal competencies



Competencies

Knowledge

- General knowledge
- Knowledge of their discipline
- Knowledge of other fields
- English
- Computer operation (for office)

Personal attributes

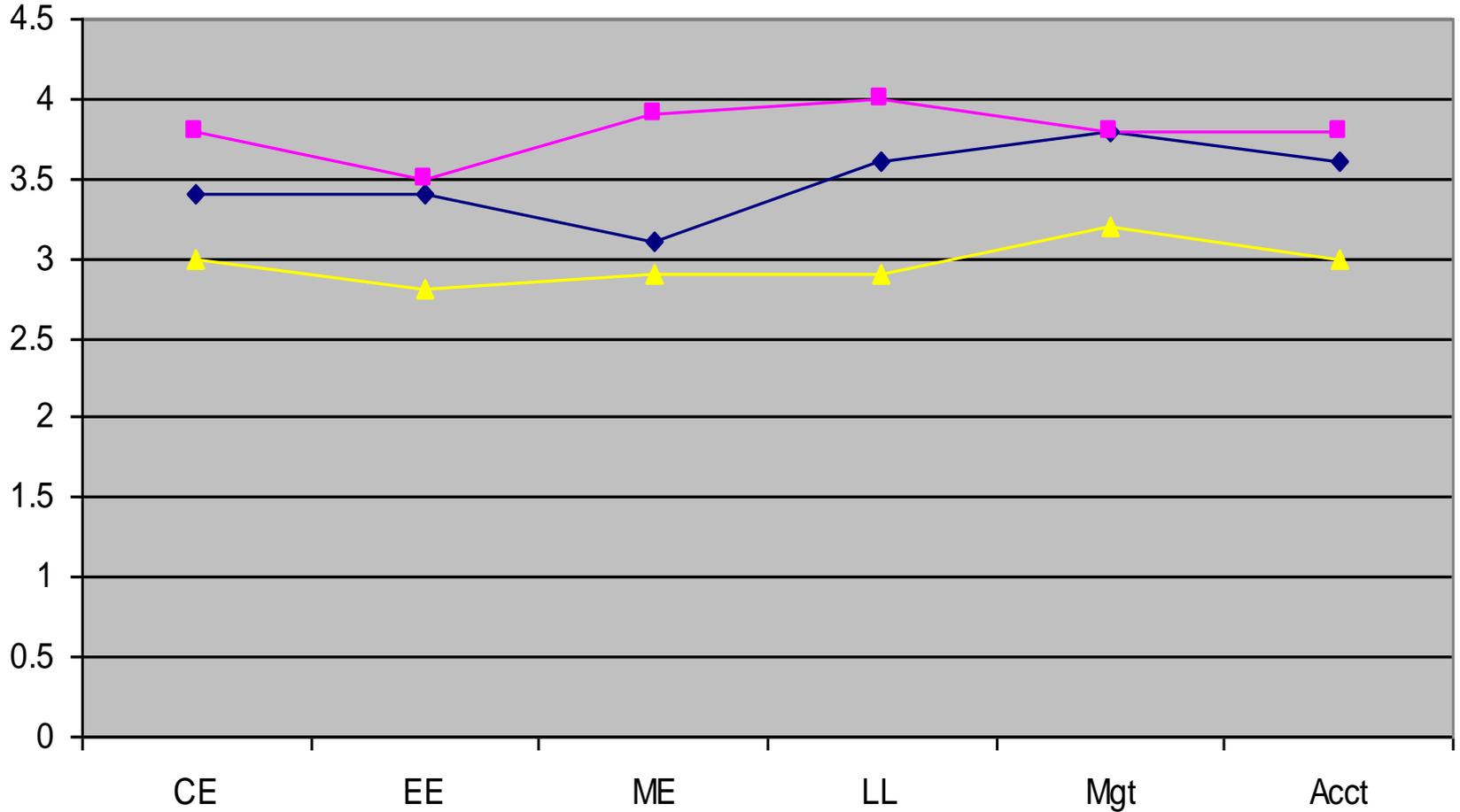
- Creativity
- Problem solving ability
- Learning ability
- Working under pressure
- Time management
- Fitness to work
- Working independently
- Analytical ability
- Ability to take responsibility
- Initiative Loyalty and integrity
- Ability to present ideas/product/report
- Planning coordinating & execution,
- Ability to doc ideas & info
- Ability to write reports, memos, docs
- Continuous learning ability

Interpersonal competencies

- Team working
- Negotiation
- Tolerance
- Adaptability
- Assertiveness
- Persistence
- Appreciating different points of views
- Understanding of the system values in the society
- Leadership
- Communication skills



Importance of knowledge



◆ General knowledge

■ Knowledge of your field or discipline

▲ Knowledge of other fields or disciplines

**Why do
companies hire
graduates?**



Knowledge,
ideas

logical, analytic, critical,
problem-solving and
synthetic skills

Flexibility,
adaptability,
ability

Willingness to learn,
speed of learning

(Harvey and Mason, 1997)

Gap

between acquired and required
competencies
in professional;
semi professional; and
non-professional study programs

A silhouette of a runner in a starting crouch on a track, positioned on the left side of the slide. The runner is wearing a dark singlet and shorts, and is positioned in starting blocks. The background is a warm orange gradient with curved lines.

Competence Gap: professional study programs

Knowledge	Acquired	Required	Gap	Z	P
General knowledge	3.3	4	-0.7	-2.550	.011
Knowledge of your field or discipline	3.7	4	-0.3	-1.389	.165
Knowledge of other fields or disciplines	2.9	3.8	-0.9	-3.653	.000
English	3.1	4.3	-1.2	-3.685	.000
Computer operation (for office)	3	4.4	-1.4	-4.214	.000
Internet	2.8	4.3	-1.5	-4.490	.000

Knowledge Gap: semi professional study programs

Knowledge	Acquired	Required	Gap	Z	<i>p</i>
General knowledge	3.7	4.2	-0.5	-5.773	.000
Knowledge of your field or discipline	3.8	4	-0.2	-3.170	.002
Knowledge of other fields or disciplines	3.1	3.7	-0.6	-6.751	.000
English	3.2	4	-0.8	-6.923	.000
Computer operation (for office)	3.4	4.6	-1.2	-8.271	.000
Internet	3	4.2	-1.2	-7.819	.000

Gap at graduation and at work in nonprofessional study programs

Knowledge	Acquired	Required	Gap	Z	<i>p</i>
General knowledge	3.6	4.1	-0.5	-3.085	.002
Knowledge of your field or discipline	4	4	0.0	-0.346	.729
Knowledge of other fields or disciplines	2.9	3.7	-0.8	-3.978	.000
English	4.3	4.7	-0.4	-2.818	.005
Computer operation (for office)	3.6	4.5	-0.9	-5.379	.010
Internet	3.2	4.3	-1.1	-4.161	.000

Personal Attributes Gap: professional study programs

Personal Attributes	Acquired	Required	Gap	Z	<i>p</i>
Creativity	3.3	4.5	-1.2	-4.478	.000
Problem solving Ability	3.3	4.7	-1.4	-4.802	.000
Learning ability	3.5	4.7	-1.2	-4.289	.000
Working under pressure	3.3	4.5	-1.2	-4.109	.000
Time management	3.1	4.5	-1.4	-4.626	.000
Fitness to work	3	4.6	-1.6	-5.120	.000
Working independently	3.5	4.3	-0.8	-4.107	.000
Analytical ability	3.5	4.5	-1.0	-3.641	.000
Ability to take responsibility	3.6	4.6	-1.0	-4.192	.000
Initiative	3.7	4.4	-0.7	-3.797	.000
Loyalty and Integrity	3.7	4.4	-0.7	-3.598	.000
Ability to present ideas/product/report	3.4	4.4	-1.0	-4.269	.000
Planning, coordinating, and execution	3.3	4.5	-1.2	-4.443	.000
Ability to document ideas and info	3.1	4.2	-1.1	-4.363	.000
Ability to write reports. memos. doc	3.2	4.5	-1.3	-4.452	.000
Continuous learning ability	3.3	4.4	-1.1	-4.085	.000

Personal Attributes Gap: Semi-professional study programs

Personal Attributes	Acquired	Required	Gap	Z	<i>p</i>
Creativity	3.3	4.4	-1.1	-8.790	.000
Problem solving Ability	3.4	4.5	-1.1	-8.838	.000
Learning ability	3.8	4.3	-0.5	-6.301	.000
Working under pressure	3.3	4.2	-0.9	-7.140	.000
Time management	3.5	4.4	-0.9	-7.854	.000
Fitness to work	3.6	4.5	-0.9	-8.020	.000
Working independently	3.7	4.4	-0.7	-6.791	.000
Analytical ability	3.4	4.3	-0.9	-7.602	.000
Ability to take responsibility	3.7	4.5	-0.8	-7.141	.000
Initiative	3.6	4.5	-0.9	-7.353	.000
Loyalty and Integrity	3.9	4.4	-0.5	-6.255	.000
Ability to present ideas/product/report	3.5	4.3	-0.8	-7.206	.000
Planning, coordinating, and execution	3.5	4.3	-0.8	-7.729	.000
Ability to document ideas and info	3.4	4.2	-0.8	-6.973	.000
Ability to write reports. memos. doc.	3.5	4.3	-0.8	-7.648	.000
Continuous learning ability	3.6	4.3	-0.7	-7.346	.000

Personal Attributes Gap: Non-professional study programs

	Acquired	Required	Gap	Z	<i>p</i>
Creativity	3.3	4.4	-1.1	-4.880	.000
Problem solving Ability	3.6	4.6	-1.0	-5.684	.000
Learning ability	3.8	4.5	-0.7	-4.528	.000
Working under pressure	3.3	4.1	-0.8	-4.051	.000
Time management	3.6	4.5	-0.9	-5.084	.000
Fitness to work	3.5	4.5	-1.0	-4.906	.000
Working independently	3.9	4.3	-0.4	-3.460	.001
Analytical ability	3.7	4.4	-0.7	-3.818	.000
Ability to take responsibility	4	4.6	-0.6	-4.714	.000
Initiative	3.9	4.5	-0.6	-4.096	.000
Loyalty and Integrity	4	4.5	-0.5	-4.612	.000
Ability to present ideas/product/report	3.6	4.3	-0.7	-4.376	.000
Planning, coordinating, and execution	3.5	4.4	-0.9	-5.080	.000
Ability to document ideas and info	3.5	4.1	-0.6	-3.646	.000
Ability to write reports. memos. doc.	3.6	4.2	-0.6	-3.878	.000
Continuous learning ability	3.8	4.5	-0.7	-4.278	.000

Interpersonal competencies Gap: Professional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	<i>p</i>
Working with other people, team working	3.6	4.6	-1.0	-3.971	.000
Negotiation	3.1	4.2	-1.1	-4.465	.000
Tolerance	3.9	4.1	-0.2	-1.849	.064
Adaptability	3.9	4.4	-0.5	-3.477	.001
Assertiveness	3.4	4.1	-0.7	-3.535	.000
Persistence	3.3	4	-0.7	-3.648	.000
Appreciating different points of view	3.7	4.2	-0.5	-2.917	.004
Underst. of the system. values in the society	3.7	4.3	-0.6	-3.601	.000
Leadership	3.2	4.4	-1.2	-3.813	.000
Communication skills	3.6	4.6	-1.0	-4.299	.000

Interpersonal competencies Gap: Semi-professional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	<i>p</i>
Working with other people, team working	3.8	4.5	-0.7	-7.079	.000
Negotiation	3.4	4.2	-0.8	-7.100	.000
Tolerance	3.7	4.1	-0.4	-4.371	.000
Adaptability	3.8	4.5	-0.7	-7.253	.000
Assertiveness	3.5	4.2	-0.7	-6.599	.000
Persistence	3.5	4	-0.5	-6.152	.000
Appreciating different points of view	3.9	4.3	-0.4	-5.555	.000
Underst. of the system. values in the society	3.7	4.1	-0.4	-5.531	.000
Leadership	3.6	4.2	-0.6	-6.644	.000
Communication skills	3.7	4.6	-0.9	-7.690	.000

Interpersonal competencies Gap: Non-professional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	<i>p</i>
Working with other people, team working	3.9	4.6	-0.7	-4.413	.000
Negotiation	3.3	3.9	-0.6	-3.759	.000
Tolerance	4.1	4.2	-0.1	-1.809	.070
Adaptability	4.1	4.5	-0.4	-3.212	.001
Assertiveness	3.7	4.2	-0.5	-2.599	.009
Persistence	3.8	4	-0.2	-1.420	.156
Appreciating different points of view	4.2	4.4	-0.2	-3.098	.002
Underst. of the system. values in the society	3.8	4.2	-0.4	-2.962	.003
Leadership	3.6	4.3	-0.7	-3.716	.000
Communication skills	4	4.7	-0.7	-5.269	.000

Knowledge

(knowledge acquired during studies and required at work):

- ◆ Professional between 0.3 and 1.5.
- ◆ Semi professional between 0.2 and 1.2;
- ◆ Non-professional between 0.0 and 1.0.
- ◆ In general between 0.6 and 1.0,
- ◆ Professional study programs the highest (1.0), and non professional program the lowest (0.6).

Personal attributes:

- ◆ In general the gap was between 4.2 and 4.7 at graduation and 3.0 and 3.7 "required at work"
- ◆ professional study programs between 0.6 and 1.7,
- ◆ Semi professional between 0.5 and 1.1,
- ◆ Non professional graduates was 0.4 and 1.1.

Interpersonal competencies

- ◆ Professional study programs between 0.2 and 1.2;
- ◆ Semi professional study program, between 0.2 and 0.9;
- ◆ Non-professional study program between 0.2 and 0.7.
- ◆ In general the lowest gap (0.4) in non professional, semi professional graduates (0.6), and professional graduates (0.7).

Strength and weaknesses:

◆ Strength:

- ◆ 'tolerance'
- ◆ 'appreciating different point of views'

◆ Weaknesses:

- ◆ 'communication skills'
- ◆ 'working with other people/team working'
- ◆ 'negotiation', and
- ◆ 'leadership'.



Conclusions:

- ◆ The gap does exist between acquisition at the time of graduation and job requirement
- ◆ The wider gap is personal attributes compared to knowledge and interpersonal competencies.
- ◆ Three important technical skills (knowledge) for work are English, computer operation and internet >> required by almost every job requirement.
- ◆ The more professional a study program, the less competent the graduates (i.e. English study program is higher in competencies compared to semi or professional study programs).

Competencies of non-professional program > semi professional programs > professional programs.

Recommendation

- ◆ Personal attributes are competencies that need to be given more attention during study period to balance the three competencies.
 - ◆ In the learning process, the teaching methods and learning activities need to be oriented into the acquisition of competencies.
 - ◆ Competencies should be exercised as often as possible and in many study conditions, be it inside or outside the classrooms.
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Thank you very much