

# Tuning ASIA SOUTH EAST TASE Second General Meeting

**Subject Specific Competences: presentation of the survey  
results in four subject areas**

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of the European Union

# Data



## NUMBER OF RESPONDENTS: SUBJECT SPECIFIC COMPETENCES

|                           | Academics | Employers | Students | Graduates | TOTAL |
|---------------------------|-----------|-----------|----------|-----------|-------|
| <b>ENGINEERING</b>        | 260       | 206       | 619      | 310       | 1395  |
| <b>MEDICINE</b>           | 312       | 214       | 717      | 286       | 1529  |
| <b>TEACHING EDUCATION</b> | 327       | 373       | 387      | 423       | 1510  |

# Analysis

|                                |  |  |
|--------------------------------|--|--|
| <b>Generic competences</b>     | General analysis<br>(common for 4 Subject<br>Areas)      | In relation to the 4 groups                              |
|                                |  | In relation to the 3 variables                           |
|                                | Analysed from the<br>perspective of each<br>Subject Area | In relation to the 4 groups                              |
|                                |  | In relation to the 3 variables                           |
|                                |  | In relation to general results                           |
|                                | <b>Subject Specific<br/>competences</b>                  | Analysed from the<br>perspective of each<br>Subject Area |
| In relation to the 3 variables |  |  |

# **SUBJECT SPECIFIC COMPETENCES**

**CIVIL ENGINEERING**

## Data

**Total number of respondents 1395:**

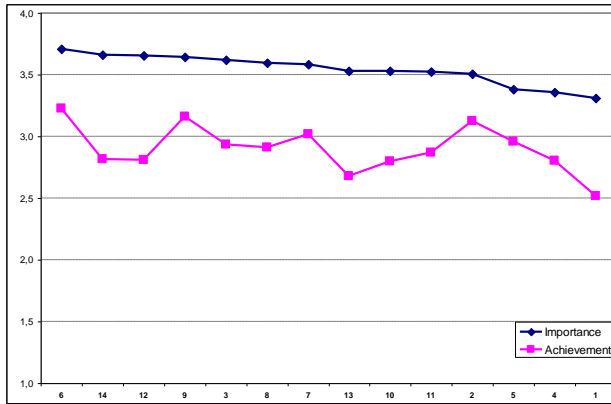
- 310 Graduates
- 206 Employers
- 260 Academics
- 619 Students

# CIVIL ENGINEERING

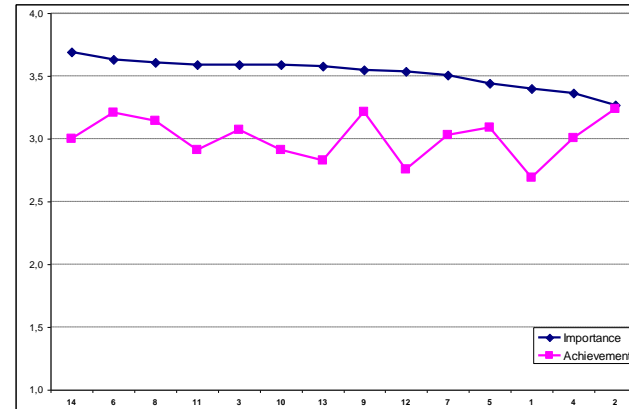
## IMPORTANCE vs. ACHIEVEMENT



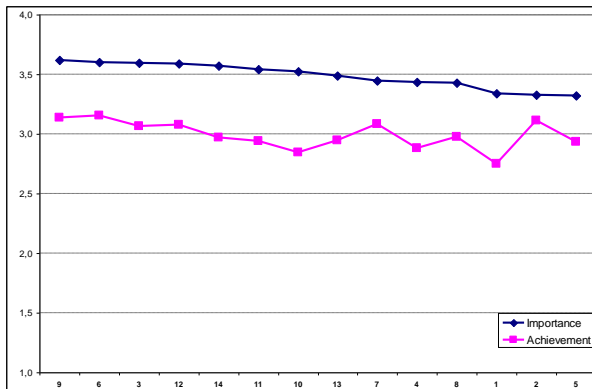
### ACADEMICS



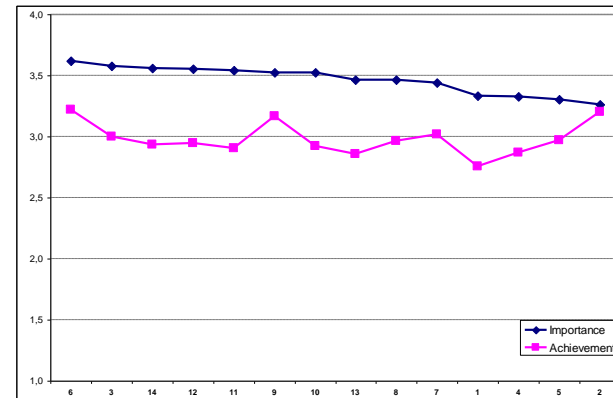
### EMPLOYERS

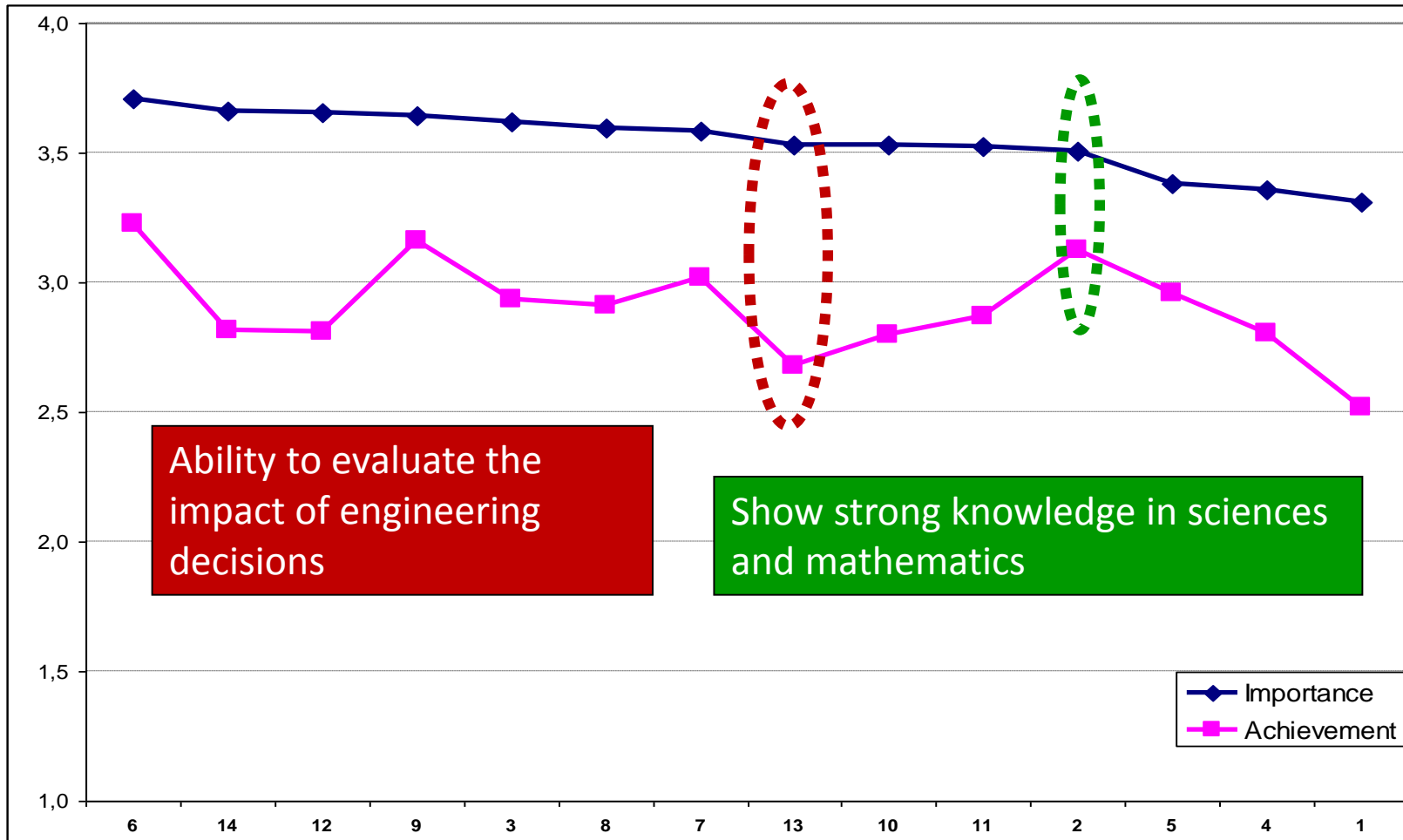


### STUDENTS



### GRADUATES





Ability to evaluate the impact of engineering decisions

Show strong knowledge in sciences and mathematics

◆ Importance  
■ Achievement

| #  | Description  | Importance | Achievement |
|----|--|------------|-------------|
| 6  | Ability to carry out civil engineering analysis  | 3,71       | 3,23        |
| 14 | Ability to integrate all civil engineering knowledge into a workable system                            | 3,66       | 2,82        |
| 12 | Ability to uphold safety   | 3,66       | 2,81        |
| 9  | Ability to design civil engineering elements (e.g : structural, geotechnical, water, transportation... | 3,64       | 3,16        |
| 3  | Ability to interpret engineering drawings  | 3,62       | 2,94        |
| 8  | Ability to utilise relevant design codes and regulations   | 3,59       | 2,91        |
| 7  | Ability to interpret engineering data from testing   | 3,58       | 3,02        |
| 13 | Ability to evaluate the impact of engineering decisions  | 3,53       | 2,68        |
| 10 | Ability to monitor the progress and quality of civil engineering works                                 | 3,53       | 2,80        |
| 11 | Ability to identify the appropriate construction technology and methods                                | 3,52       | 2,87        |
| 2  | Ability to show strong knowledge in science and mathematics (including statistics)                     | 3,51       | 3,12        |
| 5  | Ability to understand principles of material science   | 3,38       | 2,96        |
| 4  | Ability to create algorithm to solve engineering problems  | 3,36       | 2,80        |
| 1  | Ability to demonstrate entrepreneurial attributes (creative, risk taking, resilient and innovative)... | 3,31       | 2,52        |

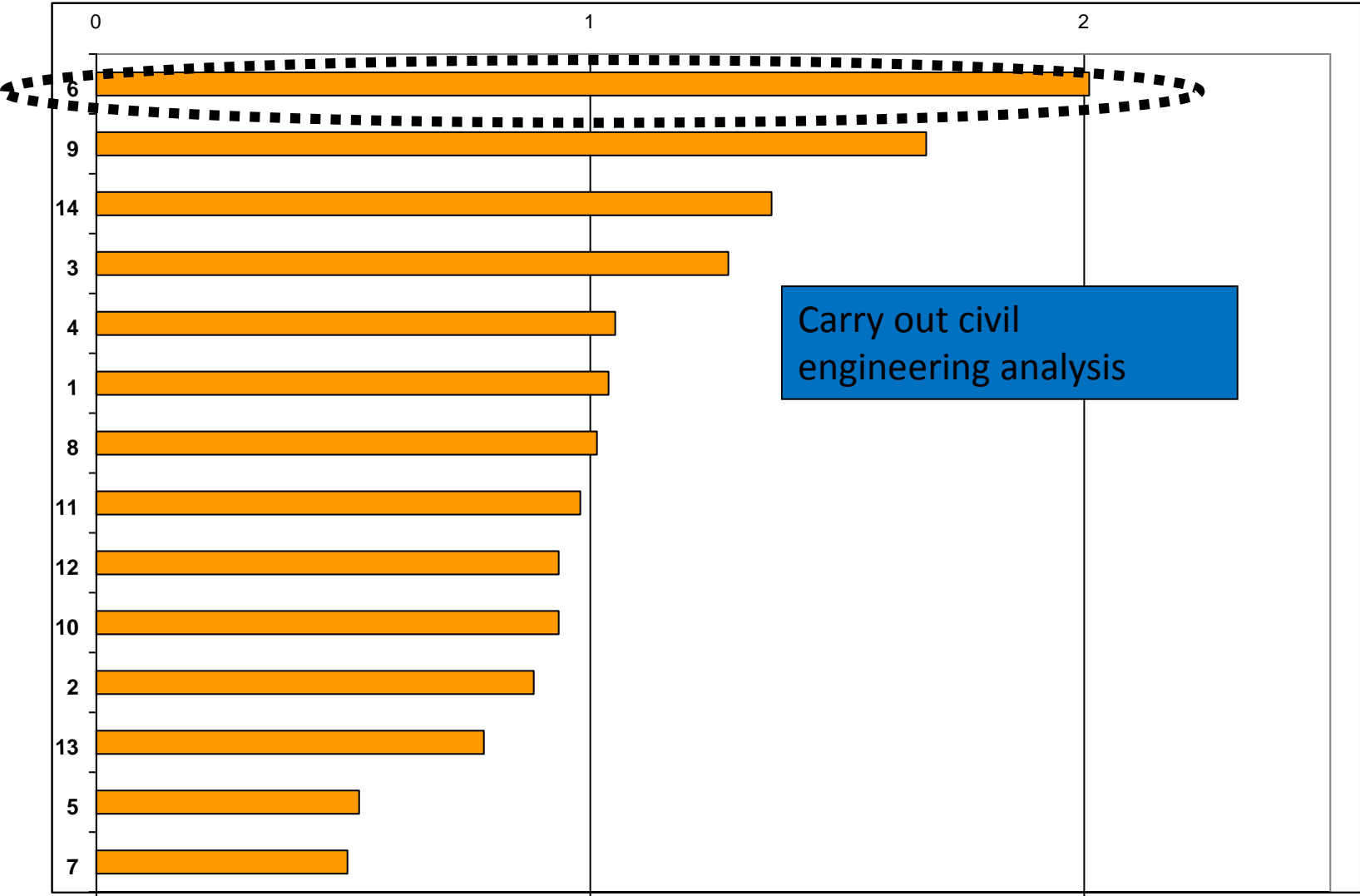


**CIVIL ENGINEERING**

**RANKING**



**GRADUATES**



Carry out civil engineering analysis

# **SUBJECT SPECIFIC COMPETENCES**

**MEDICINE**

## Data

**Total number of respondents 1613:**

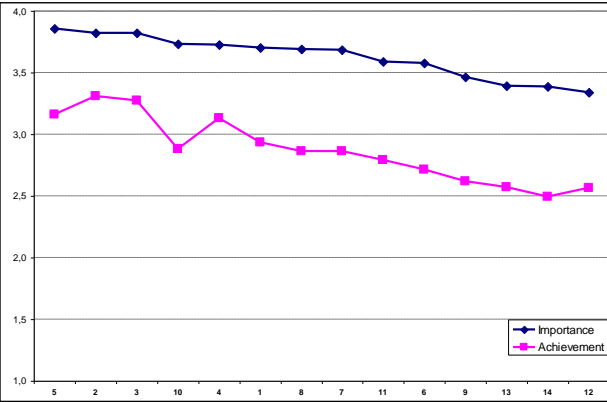
- 305 Graduates
- 224 Employers
- 330 Academics
- 754 Students

# MEDICINE

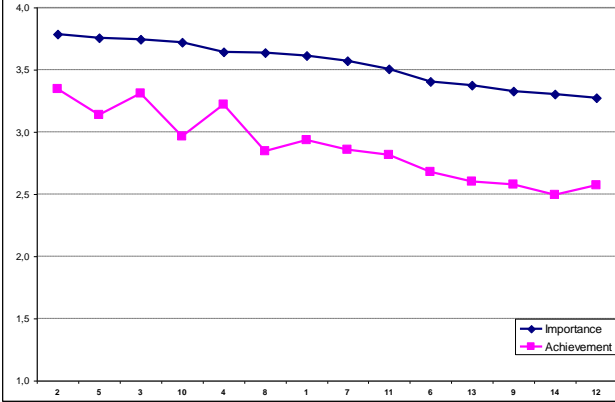
## IMPORTANCE vs. ACHIEVEMENT



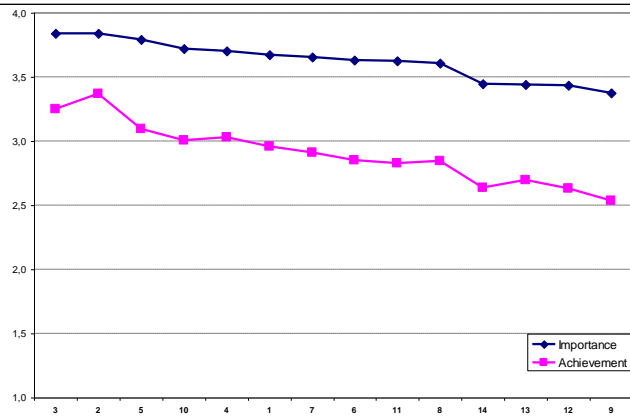
# ACADEMICS



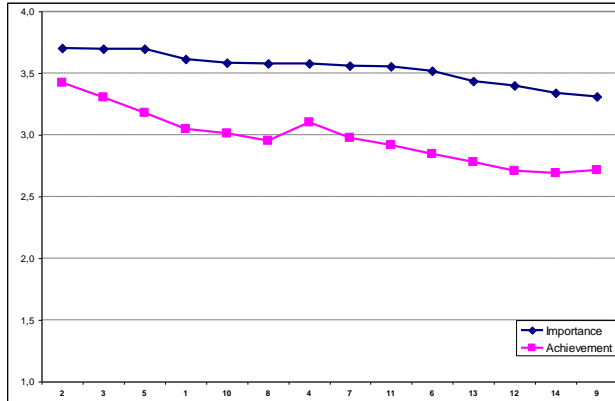
# EMPLOYERS



# STUDENTS



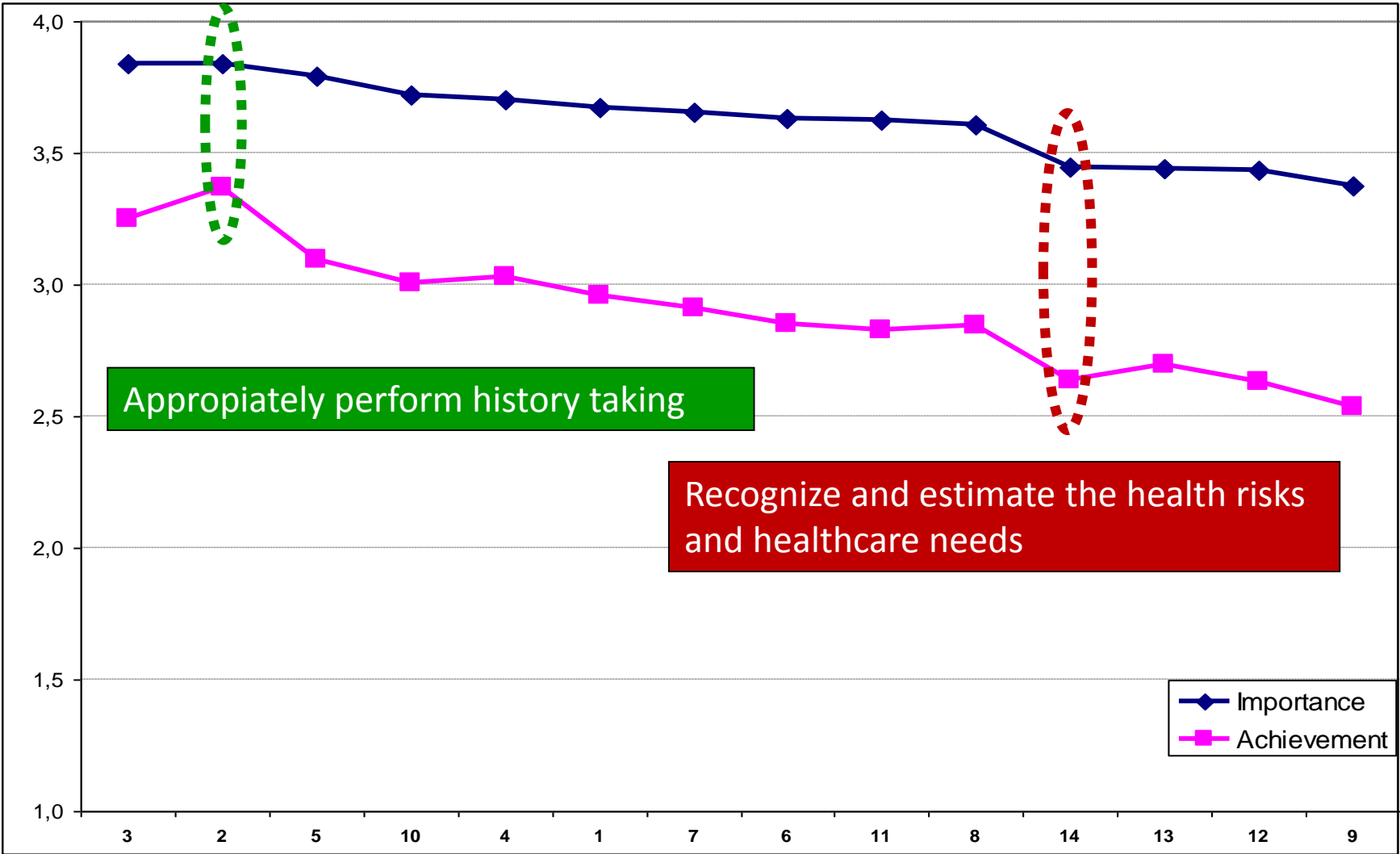
# GRADUATES



MEDICINE

STUDENTS

IMPORTANCE vs. ACHIEVEMENT



Appropriately perform history taking

Recognize and estimate the health risks and healthcare needs

◆ Importance  
■ Achievement

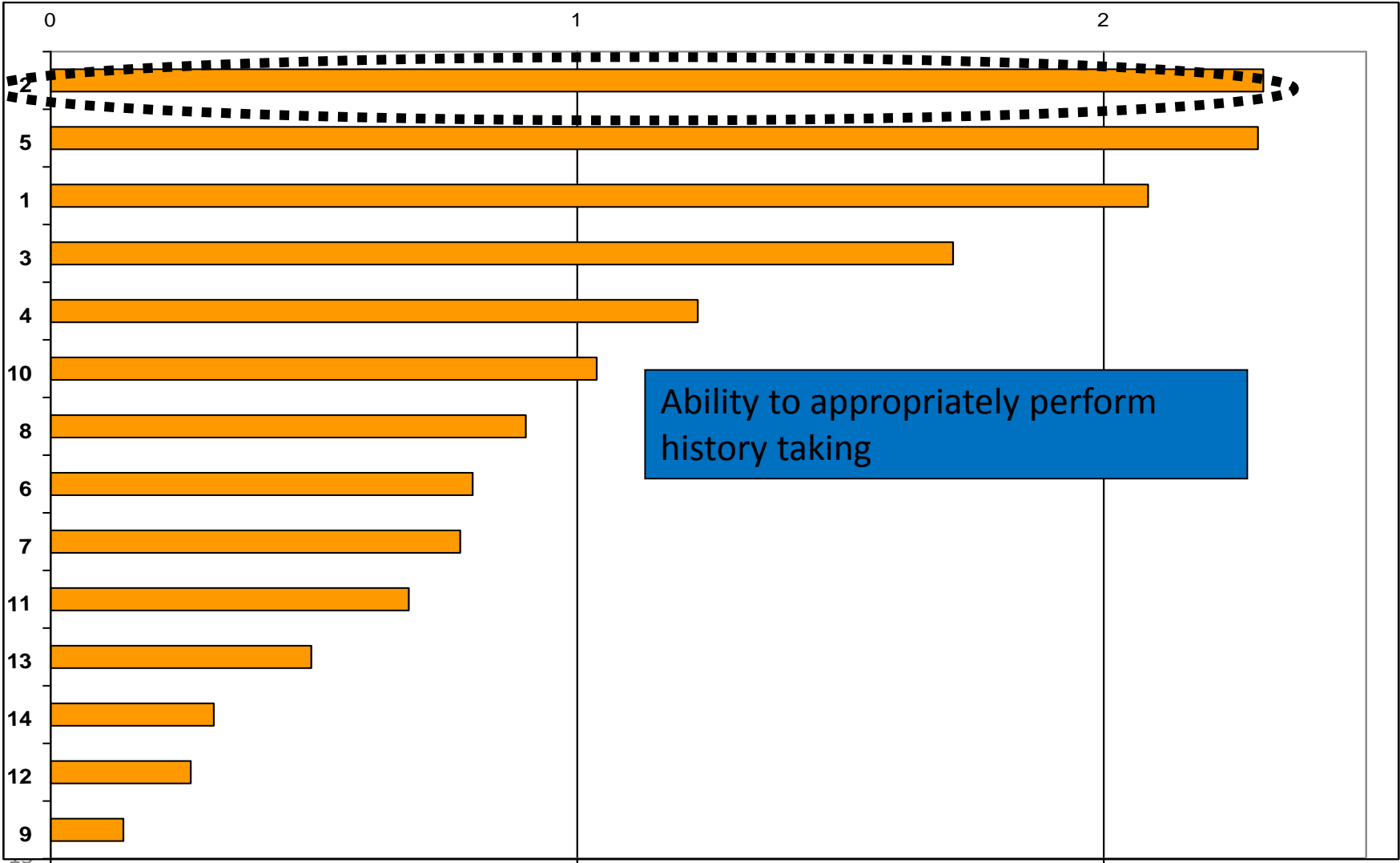
| #  | Description  | Importance | Achievement |
|----|--|------------|-------------|
| 2  | Ability to appropriately perform history taking  | 3,79       | 3,35        |
| 5  | Ability to integrate clinical and work-up information to make diagnosis and differential diagnosis             | 3,75       | 3,14        |
| 3  | Ability to appropriately perform physical examination  | 3,74       | 3,31        |
| 10 | Ability to ensure and maintain patient safety  | 3,72       | 2,96        |
| 4  | Ability to appropriately perform diagnostic investigation  | 3,64       | 3,22        |
| 8  | Ability to perform consultation with patients and family with empathy  | 3,64       | 2,85        |
| 1  | Ability to practice according to good clinical practice (GCP) in various clinical settings                     | 3,61       | 2,93        |
| 7  | Ability to explain the benefit and risk of any therapeutic options   | 3,57       | 2,86        |
| 11 | Ability to promote health and preventive medicine  | 3,51       | 2,81        |
| 6  | Ability to provide appropriate therapy with a biopsychosocial approach   | 3,41       | 2,68        |
| 13 | Ability to demonstrate a balanced dedication to serve the interest of individual patient and the commitment... | 3,38       | 2,60        |
| 9  | Ability to manage medical record appropriately   | 3,33       | 2,58        |
| 14 | Ability to recognize and estimate the health risks and healthcare needs of a defined population...             | 3,31       | 2,50        |
| 12 | Ability to recognize and address public concerns and controversial issues related to health                    | 3,27       | 2,57        |

MEDICINE

RANKING



ACADEMICS



Ability to appropriately perform history taking

# **SUBJECT SPECIFIC COMPETENCES**

**TEACHER EDUCATION**



## Data

**Total number of respondents 1554:**

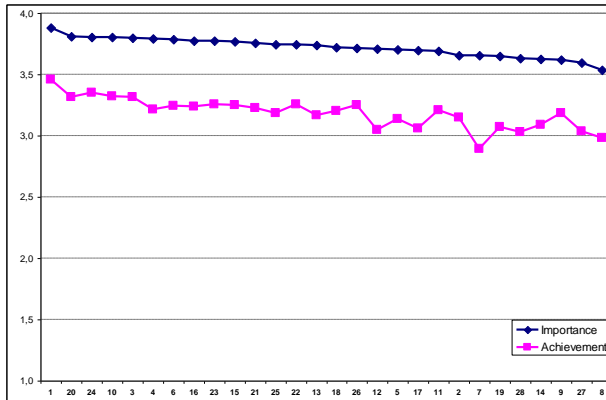
- 436 Graduates
- 391 Employers
- 334 Academics
- 393 Students

# TEACHER EDUCATION

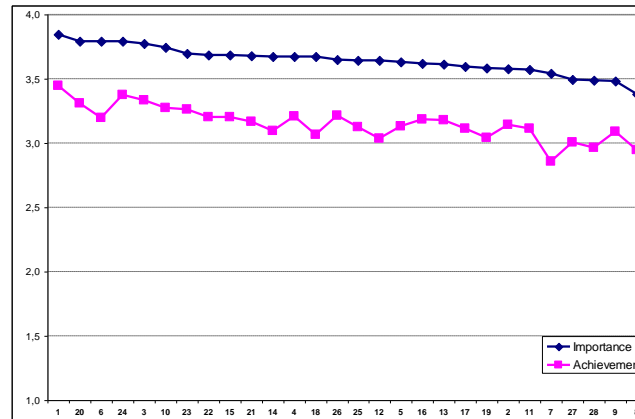
## IMPORTANCE vs. ACHIEVEMENT



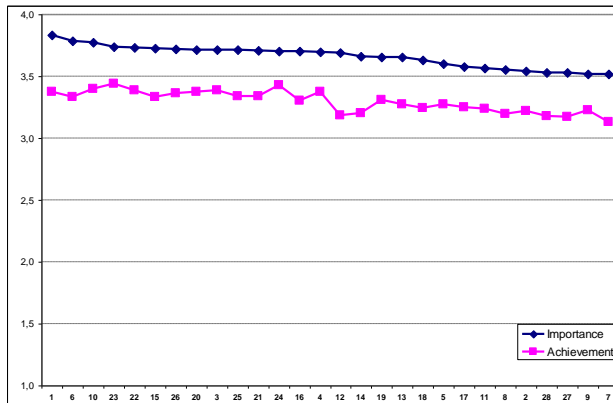
### ACADEMICS



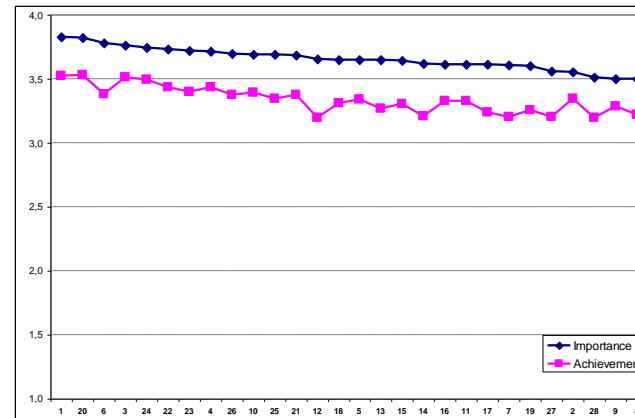
### EMPLOYERS



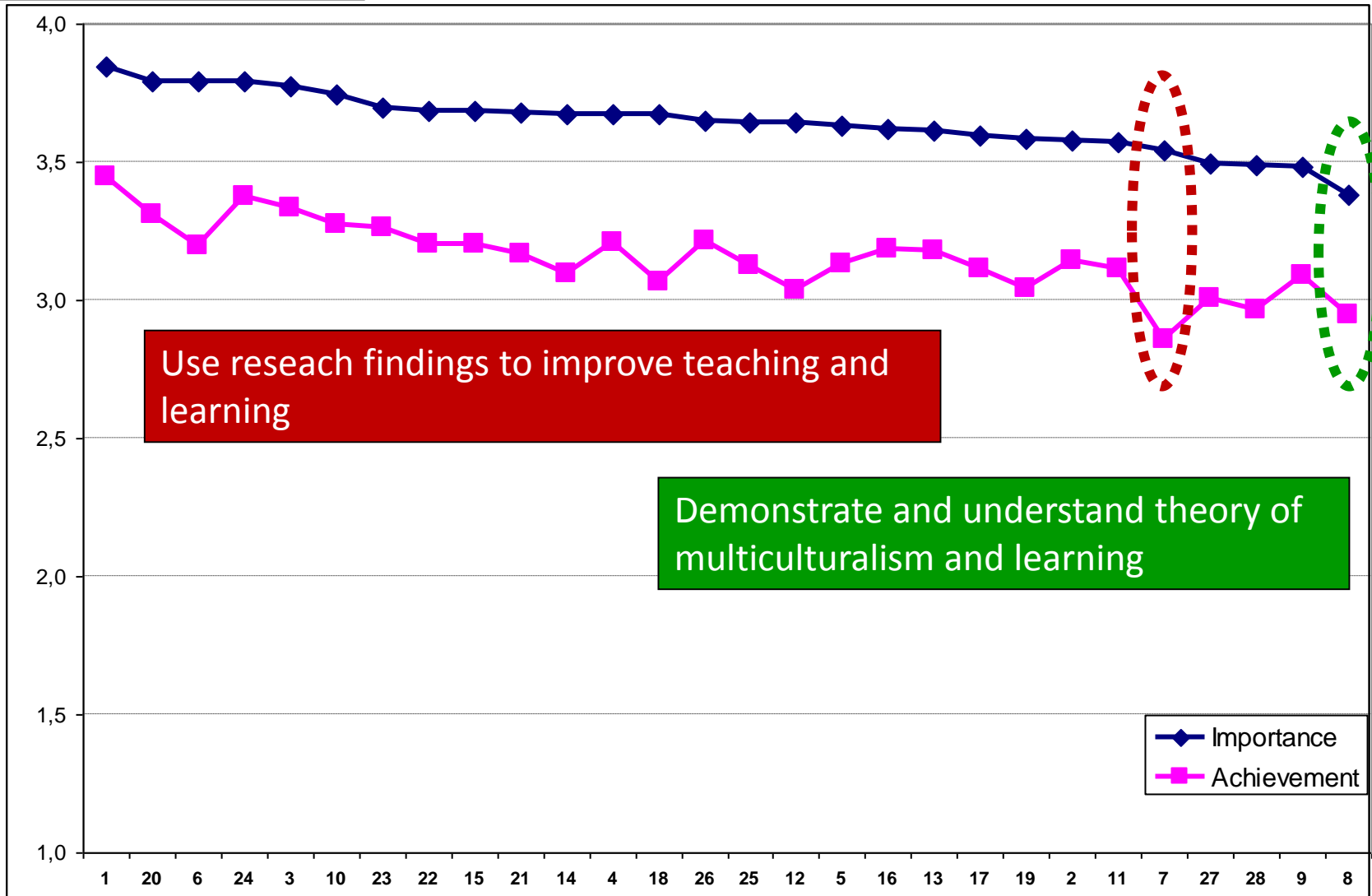
### STUDENTS



### GRADUATES



EMPLOYERS



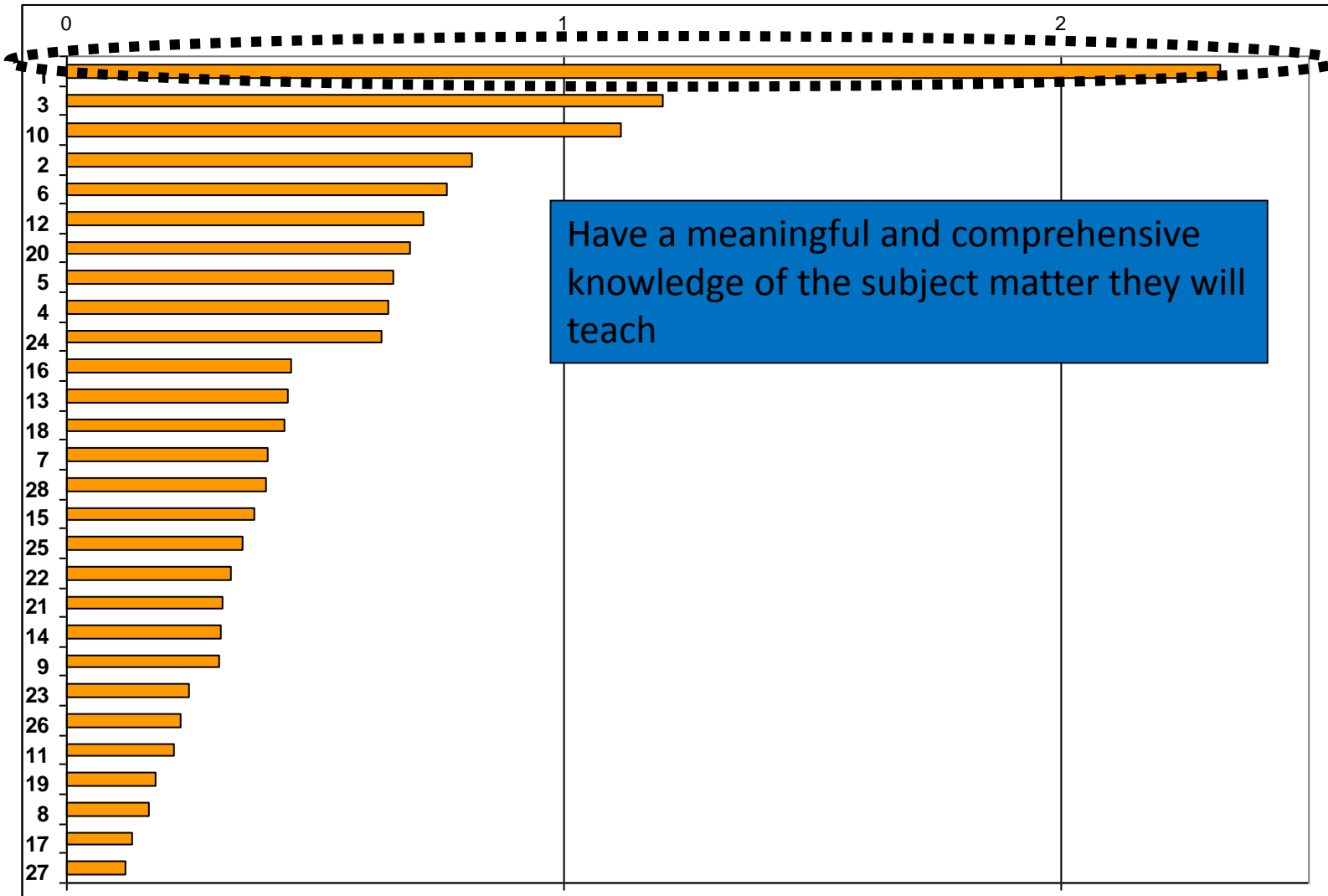
Use reseach findings to improve teaching and learning

Demonstrate and understand theory of multiculturalism and learning

◆ Importance  
■ Achievement

| #  | Description   | Importance | Achievement |
|----|---|------------|-------------|
| 1  | Have a meaningful and comprehensive knowledge of the subject matter they will teach                     | 3,83       | 3,52        |
| 20 | Ability to demonstrate integrity and professionalism  | 3,82       | 3,53        |
| 6  | Understand the different characteristics of learners  | 3,78       | 3,38        |
| 3  | Understand pedagogy and learning approaches related to a specific specialization                        | 3,76       | 3,51        |
| 24 | Ability to demonstrate commitment to the teaching profession  | 3,74       | 3,49        |
| 22 | Ability to respect diversity in working with students, colleagues, families, community members...       | 3,73       | 3,43        |
| 23 | Willingness to learn from students, colleagues, and other professionals                                 | 3,72       | 3,40        |
| 4  | Comprehend concepts of testing, assessment and evaluation of learning                                   | 3,71       | 3,44        |
| 26 | Ability to engage with fellow teachers and other professionals to enhance the teaching-learning process | 3,70       | 3,38        |
| 10 | Ability to select teaching methods, learning activities, and instructional materials or resources...    | 3,69       | 3,39        |
| 25 | Ability to practice reflective thinking to improve their teaching practices                             | 3,69       | 3,34        |
| 21 | Willingness to apply innovations to the teaching and learning process                                   | 3,69       | 3,37        |
| 12 | Ability to facilitate learners' potential development to actualize their various potentials...          | 3,66       | 3,20        |
| 18 | Ability to demonstrate commitment to develop students to reach their potential                          | 3,65       | 3,31        |
| 5  | Understand the curriculum development process, its structure, content and expected learning outcomes    | 3,65       | 3,34        |
| 13 | Ability to appropriately utilize information and communication technologies to support...               | 3,65       | 3,27        |
| 15 | Ensure a safe and conducive learning environment  | 3,64       | 3,30        |
| 14 | Utilize appropriate strategies for managing student behavior  | 3,62       | 3,21        |
| 16 | Ability to use appropriate assessment tools and methods to assess, and evaluate...                      | 3,61       | 3,32        |
| 11 | Ability to implement curricula related to assigned fields of study                                      | 3,61       | 3,33        |
| 17 | Ability to utilize assessment data to improve the teaching-learning process                             | 3,61       | 3,24        |
| 7  | Able to use research findings to improve teaching and learning  | 3,61       | 3,20        |
| 19 | Ability to demonstrate self-evaluation and use the results for improvement                              | 3,60       | 3,26        |
| 27 | Ability to initiate and maintain mutually-beneficial linkages and networks                              | 3,56       | 3,20        |
| 2  | Able to understand educational philosophy   | 3,56       | 3,34        |
| 28 | Ability to conduct action research  | 3,51       | 3,20        |
| 9  | Demonstrate understanding of different theories on learner's developmental process                      | 3,50       | 3,28        |
| 8  | Demonstrate understanding of theory of multiculturalism and learning.                                   | 3,50       | 3,22        |

ACADEMICS



Have a meaningful and comprehensive knowledge of the subject matter they will teach

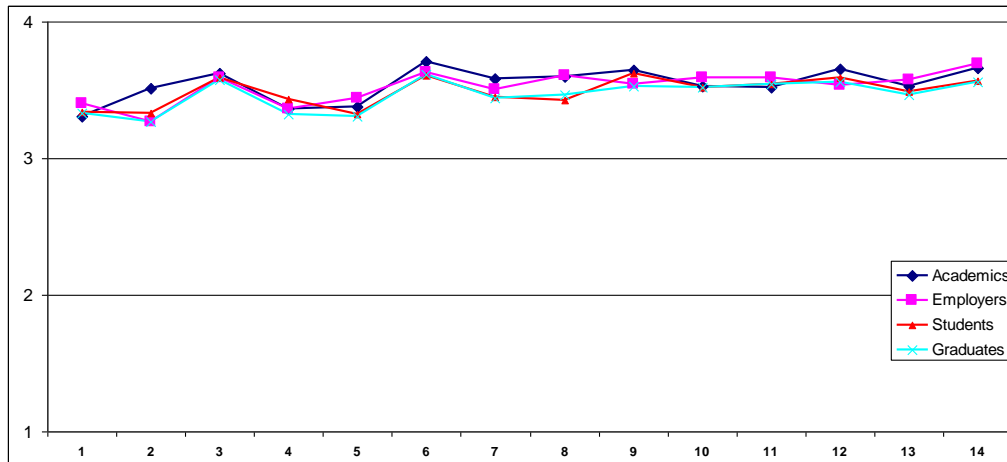
# Analysis

|                                |  |  |
|--------------------------------|--|--|
| <b>Generic competences</b>     | General analysis<br>(common for 4 Subject<br>Areas)      | In relation to the 4 groups                              |
|                                |  | In relation to the 3 variables                           |
|                                | Analysed from the<br>perspective of each<br>Subject Area | In relation to the 4 groups                              |
|                                |  | In relation to the 3 variables                           |
|                                |  | In relation to general results                           |
|                                | <b>Subject Specific<br/>competences</b>                  | Analysed from the<br>perspective of each<br>Subject Area |
| In relation to the 3 variables |  |  |

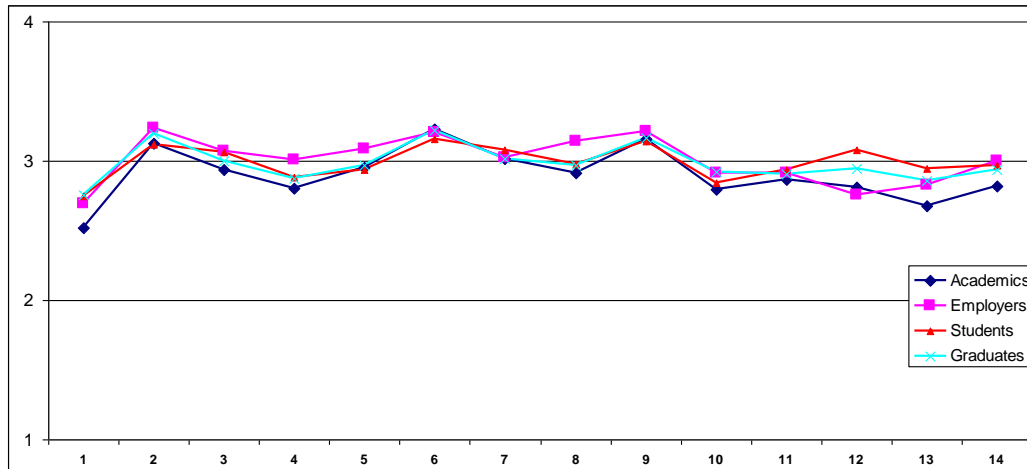
## **SUBJECT SPECIFIC COMPETENCES**

**CIVIL ENGINEERING**

# CIVIL ENGINEERING



## IMPORTANCE



## ACHIEVEMENT



## CIVIL ENGINEERING

### CORRELATIONS AMONG GROUPS



#### IMPORTANCE

|                  | <u>Academics</u> | <u>Employers</u> | <u>Students</u> | <u>Graduates</u> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,6946           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,7903           | 0,7498           | 1,0000          |                  |
| <i>Graduates</i> | 0,8178           | 0,8959           | 0,9353          | 1,0000           |

#### ACHIEVEMENT

|                  | <u>Academics</u> | <u>Employers</u> | <u>Students</u> | <u>Graduates</u> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,8924           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,8544           | 0,6548           | 1,0000          |                  |
| <i>Graduates</i> | 0,9605           | 0,8432           | 0,8779          | 1,0000           |

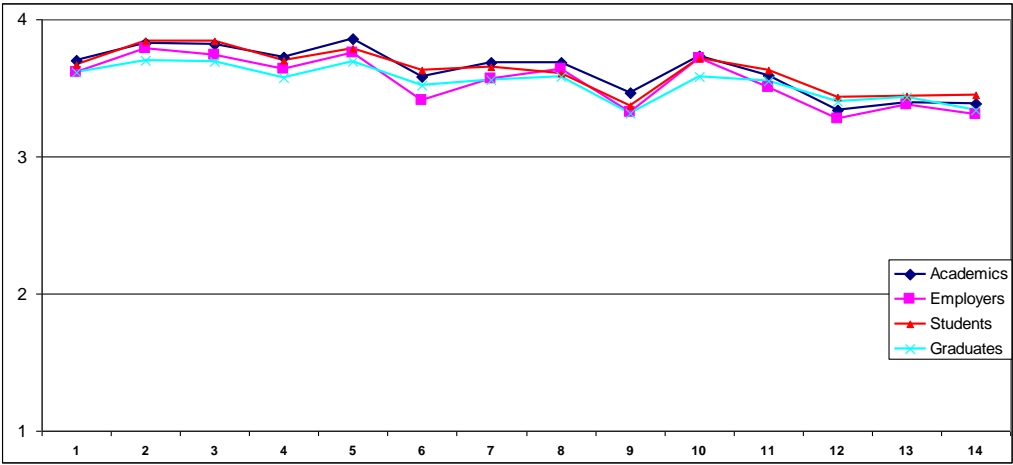
#### RANKING

|                  | <u>Academics</u> | <u>Employers</u> | <u>Students</u> | <u>Graduates</u> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,7153           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,7817           | 0,7789           | 1,0000          |                  |
| <i>Graduates</i> | 0,9284           | 0,8893           | 0,8484          | 1,0000           |

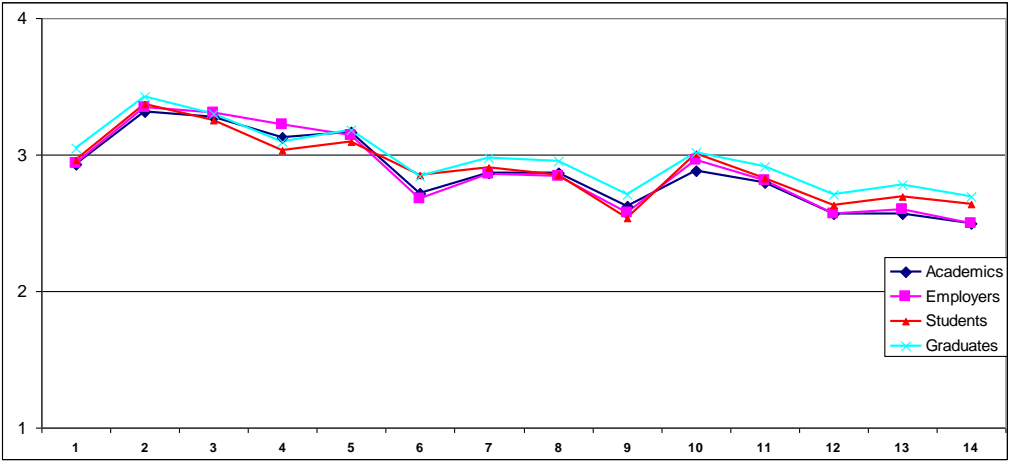
# **SUBJECT SPECIFIC COMPETENCES**

**MEDICINE**

# MEDICINE



## IMPORTANCE



## ACHIEVEMENT

**MEDICINE****CORRELATIONS  
AMONG GROUPS****IMPORTANCE**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9699           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,9481           | 0,9353           | 1,0000          |                  |
| <i>Graduates</i> | 0,9348           | 0,9391           | 0,9664          | 1,0000           |

**ACHIEVEMENT**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9911           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,9526           | 0,9564           | 1,0000          |                  |
| <i>Graduates</i> | 0,9794           | 0,9753           | 0,9847          | 1,0000           |

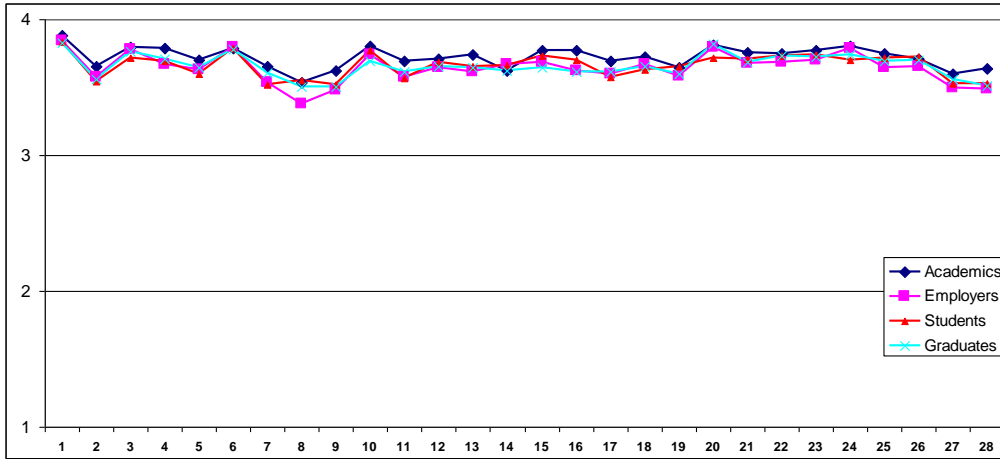
**RANKING**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9571           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,9611           | 0,9570           | 1,0000          |                  |
| <i>Graduates</i> | 0,9647           | 0,9400           | 0,9788          | 1,0000           |

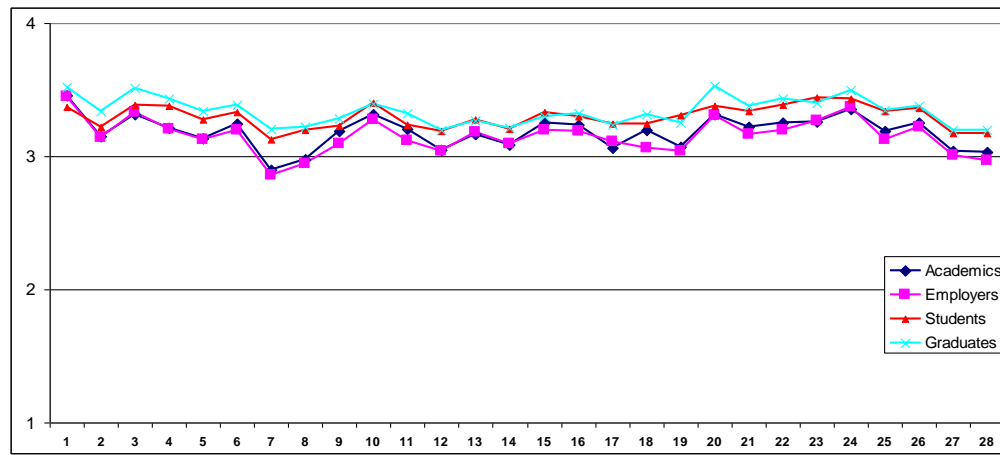
# **SUBJECT SPECIFIC COMPETENCES**

**TEACHER EDUCATION**

# TEACHER EDUCATION



**IMPORTANCE**



**ACHIEVEMENT**

**NURSING****CORRELATIONS  
AMONG GROUPS****IMPORTANCE**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9021           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,8409           | 0,8605           | 1,0000          |                  |
| <i>Graduates</i> | 0,8836           | 0,9365           | 0,8524          | 1,0000           |

**ACHIEVEMENT**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9533           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,8457           | 0,8642           | 1,0000          |                  |
| <i>Graduates</i> | 0,8892           | 0,8941           | 0,8577          | 1,0000           |

**RANKING**

|                  | <i>Academics</i> | <i>Employers</i> | <i>Students</i> | <i>Graduates</i> |
|------------------|------------------|------------------|-----------------|------------------|
| <i>Academics</i> | 1,0000           |                  |                 |                  |
| <i>Employers</i> | 0,9780           | 1,0000           |                 |                  |
| <i>Students</i>  | 0,9267           | 0,9160           | 1,0000          |                  |
| <i>Graduates</i> | 0,9283           | 0,9350           | 0,9633          | 1,0000           |

## **Some preliminary conclusions ...**

- **Big gaps between importance and achievement**
- **Some subject specific competences strongly linked to generic competences**
- **Differences between importance and ranking**
- **Differences within the 4 groups in terms of importance**



*The  
End*