

LLP Project: ATTRACT

”Enhance the Attractiveness of Studies in Science and Technology”

**WP 7 - Attracting students to studies in
science and technology /engineering
education**

Summary

- Goals
- Participant institutions
- Recruitment and access system: Places, Required qualifications, Selection criteria, Calendar of activities for the access
- Initiatives - inventory of actions or practices: institutional and national
- Involvement of stakeholders
- Field trials/questionnaires: secondary and entrant students

Goals

Interest young people in Science & Technology and Engineering (S&T/E)

Attract candidates to the higher education S&T/E programmes

Balance gender representation in S&T/E programmes

Participant institutions

Aalto/Finland

IST/Portugal

KTH, LiTH, Uppsala/Sweden

KULeuven/Belgium

TCD/Ireland

Torino/Italy

Recruitment and access systems

Degrees of freedom that the partner institutions may have in shaping the recruitment system:

- Whether there is a *numerus clausus* and to what extent it is decided by the institution

Typically, there is a *numerus clausus* defined by the Ministry with proposal from the institutions (Exceptions: Belgium, Italy) → few degrees of freedom

- What prior qualifications give access to the engineering programmes of the partner institutions

There are no significant differences among the considered countries: secondary education diploma. Alternative procedures: little in common.

- To what extent the institution may define the selection criteria

Several differences among the countries: students must pass an exam, whether an entrance exam or a state exam. Some universities have additional requirements for students who intend to pursue STE programmes.

Recruitment and access systems: Calendar

Tasks		Year X-1							Year X									
Activities	Partners	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Recruitment/ activities	Finland																	
	Portugal																	
	Sweden																	
	Ireland																	
	Italy																	
Exams/ Appllications	Finland																	
	Portugal																	
	Sweden																	
	Ireland																	
	Italy																	
Enrollment	Finland																	
	Portugal																	
	Sweden																	
	Ireland																	
	Italy																	

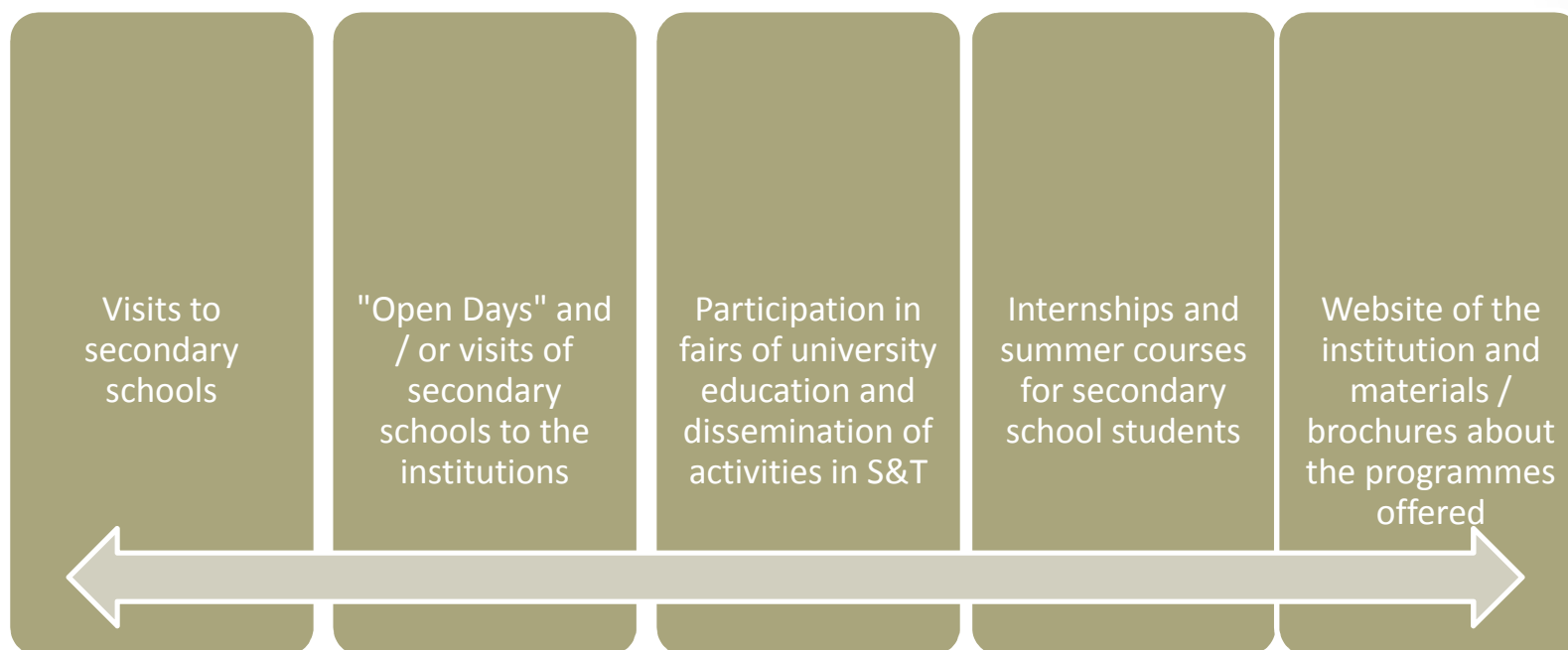
Different calendars of access activities among the countries.

Initiatives

- Contributions on the basis of a report template
- Institutional initiatives (partners' contributions)
 - By institution and associated organizations
 - Entity responsible for the action and partnerships
 - Aims
 - Target population, methodology and period of application
 - Results obtained
 - Reports, studies and surveys
 - Gender situation

Initiatives: Institutional Level (transversal)

Significant degree of similarity of institutional activities to attract students to S&T/E.



Initiatives: Institutional Level (specific)

Brief university experiences or internships to experience academic life (KTH, LiTH, TCD)

1st year students to visit school (UPPSALA) or teachers back to school (IST)

Media Advertising (TCD and IST), presence in social networks (IST), and developing applications for mobile phones / IPHONE (TCD);

Attracting students from social and ethnic minorities (TCD)

Reinforcing the relationship secondary school / university (KTH, Uppsala)

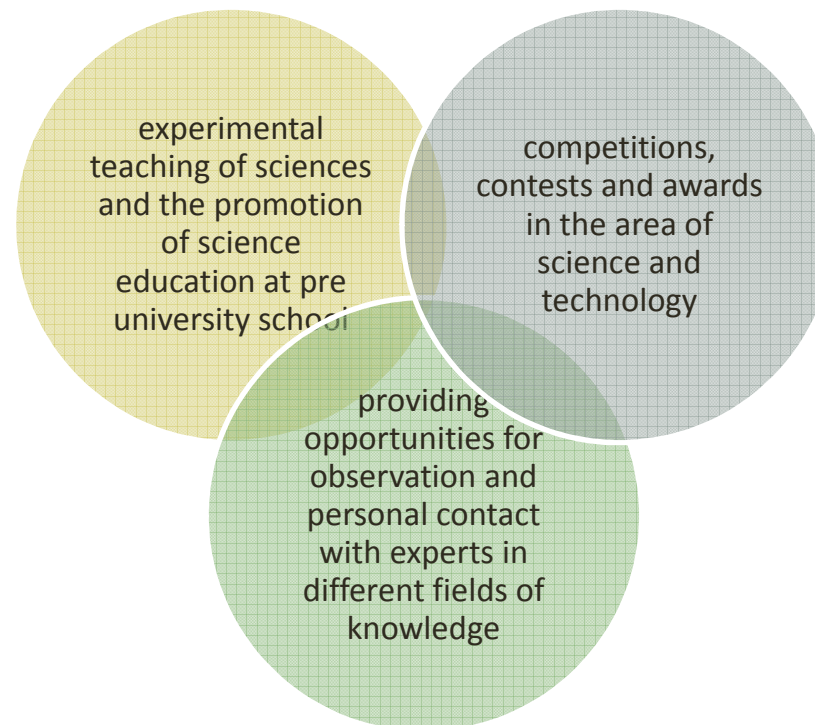
Promoting workshops on job career (KTH, TCD, LiTH) and exhibits on S & T (TCD)

Mathematics coaching (LiTH)

Initiatives: National Level

In all countries there are activities at the national level to promote science and technology and to attract students to these areas.

Similar aims: promote the scientific and technological culture among younger population



Initiatives: Gender breakdown

LOW FEMALE ATTRACTIVENESS TO THE AREA S & T

- Summer school for girls (KTH); Girls week (UPPSALA)
- International Women's Week (TCD)
- promoting access to training in engineering by women and development of interdisciplinary courses, where the ratio of women is higher (Aalto)
- Quintek days, inviting female students to experience academic life (LiTH)

Examples of activities to combat this trend:

Involvement of stakeholders

- **Why:**
 - Identification of opportunities to attract students to S&T/E
 - Participation in institutional activities
 - Institutional participation in other organizations' activities to promote S&T/E
- **What:**
 - Secondary Schools
 - Professional associations
 - Student organizations
 - Business employing engineers
 - Organizations promoting S&T

Field Trials/Questionnaires

Questionnaires: entrant students and secondary students

- Adaptations by the partners of the section concerning the secondary education system structure

Specific topics for entrant students:

- Time of decision of the engineering programme

Specific topics for secondary students:

- Decision to follow tertiary studies and specifically engineering
- Area of study chosen

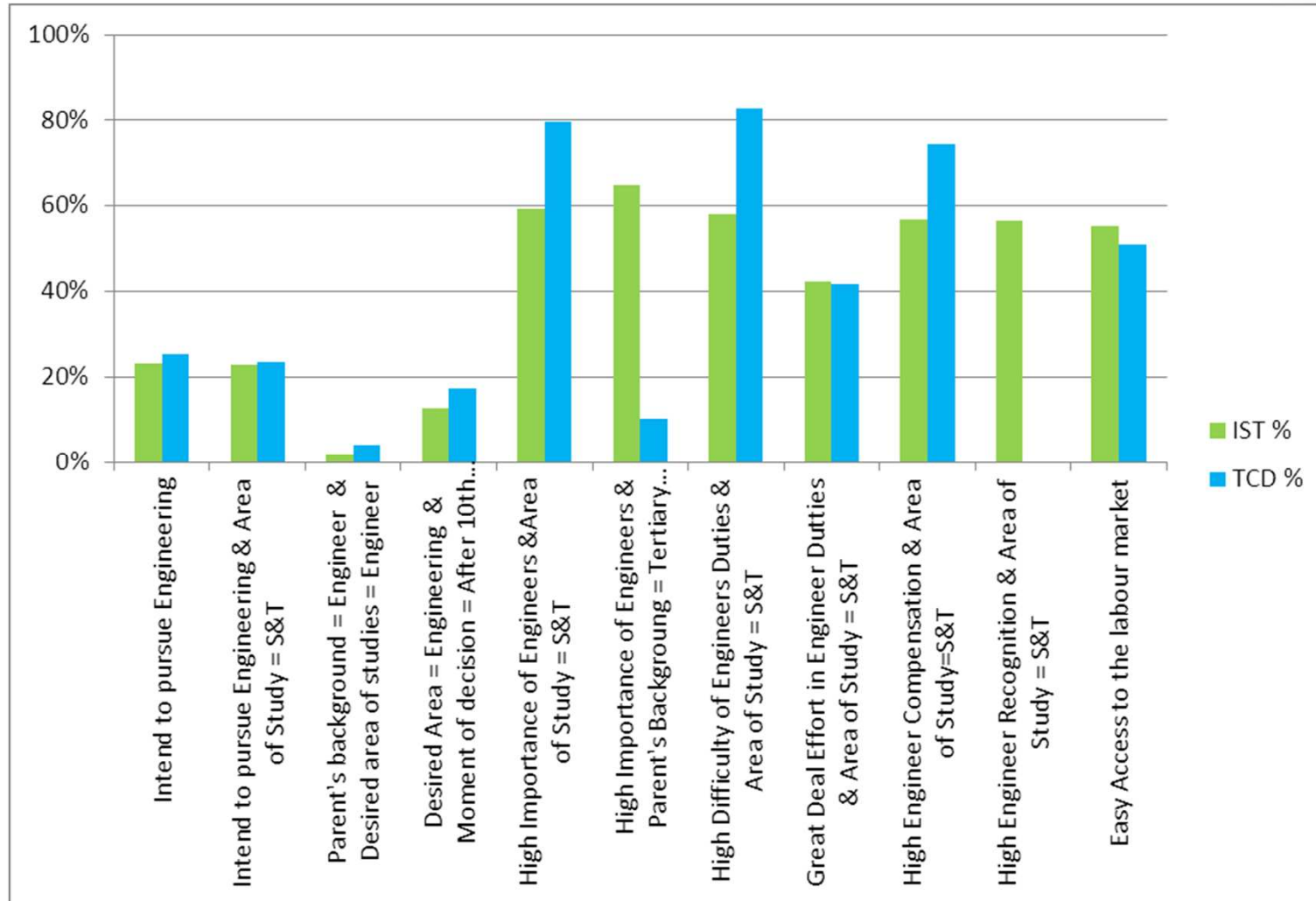
Field Trials/Questionnaires (cont.)

Common topics of questionnaires:

- Area of study in secondary education
- Parental background
- Perception of importance of engineers
- Perception of the difficulty of professional duties of engineers, compared with other professions
- Perception of the effort required by engineering programmes, compared with others
- Perception of pay level of engineers, compared with other professions
- Perception of importance given by employers to engineers, compared with other professionals
- Perception of ease of access to labour market

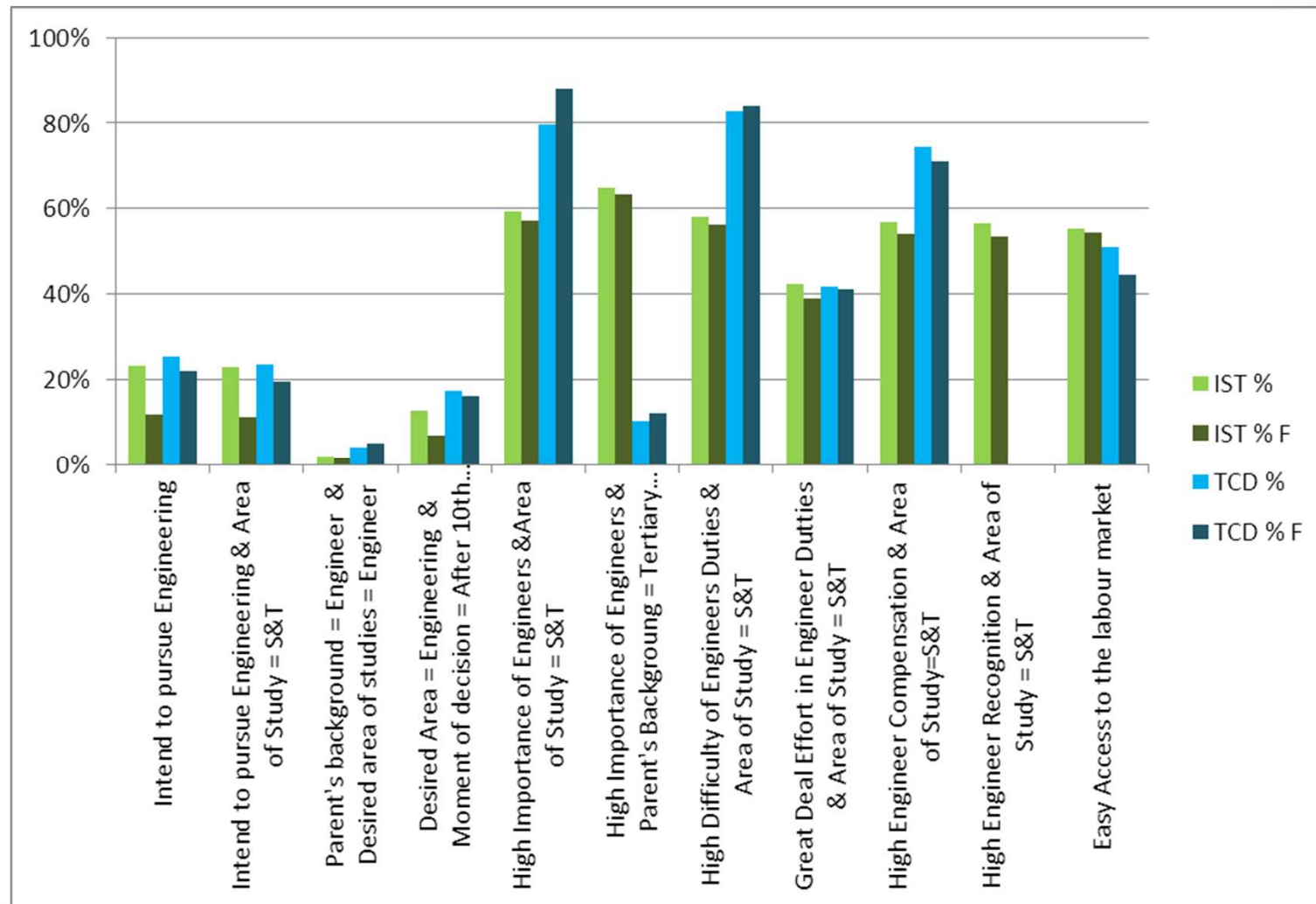
Field Trials/Questionnaires (cont.)

Preliminary results: secondary students (totals)



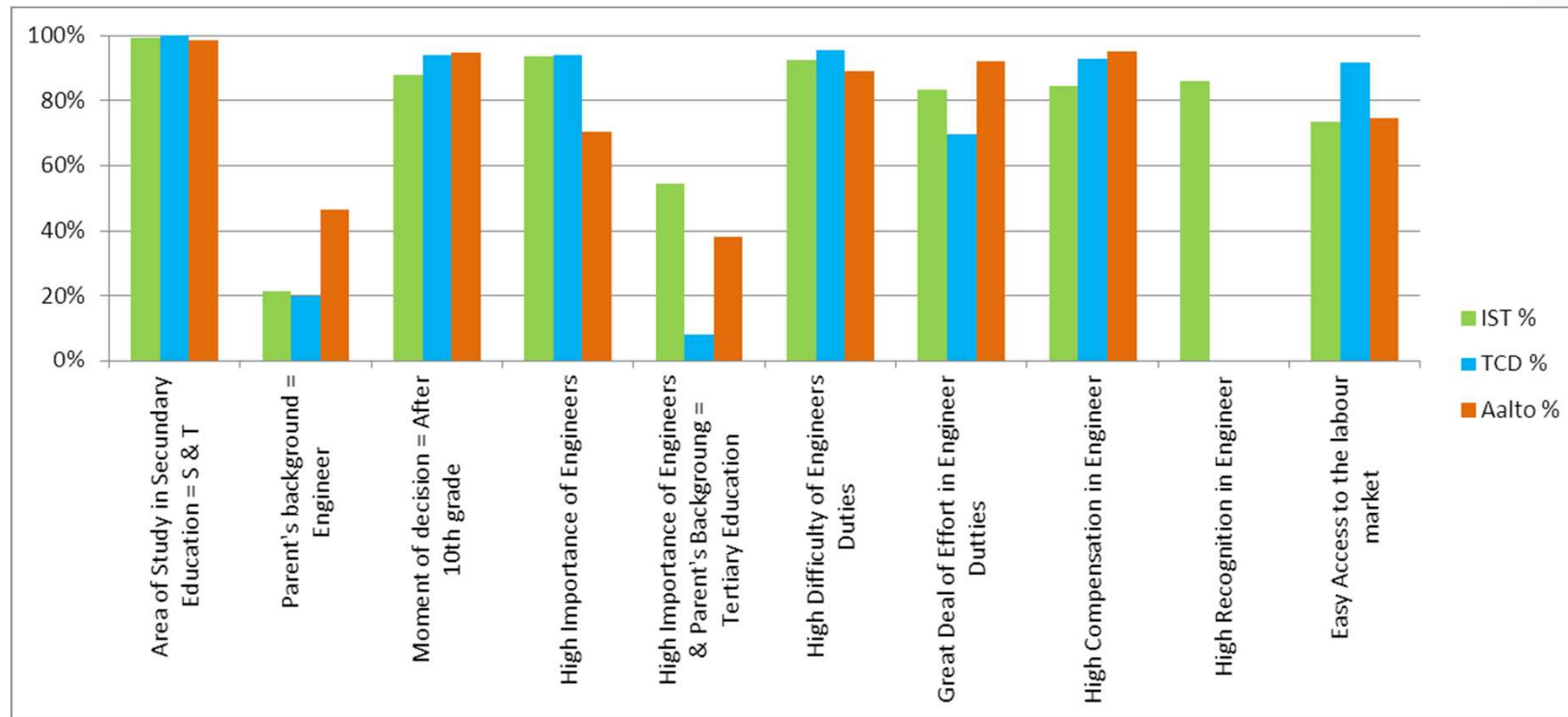
Field Trials/Questionnaires (cont.)

Preliminary results: secondary students (totals vs. female students)



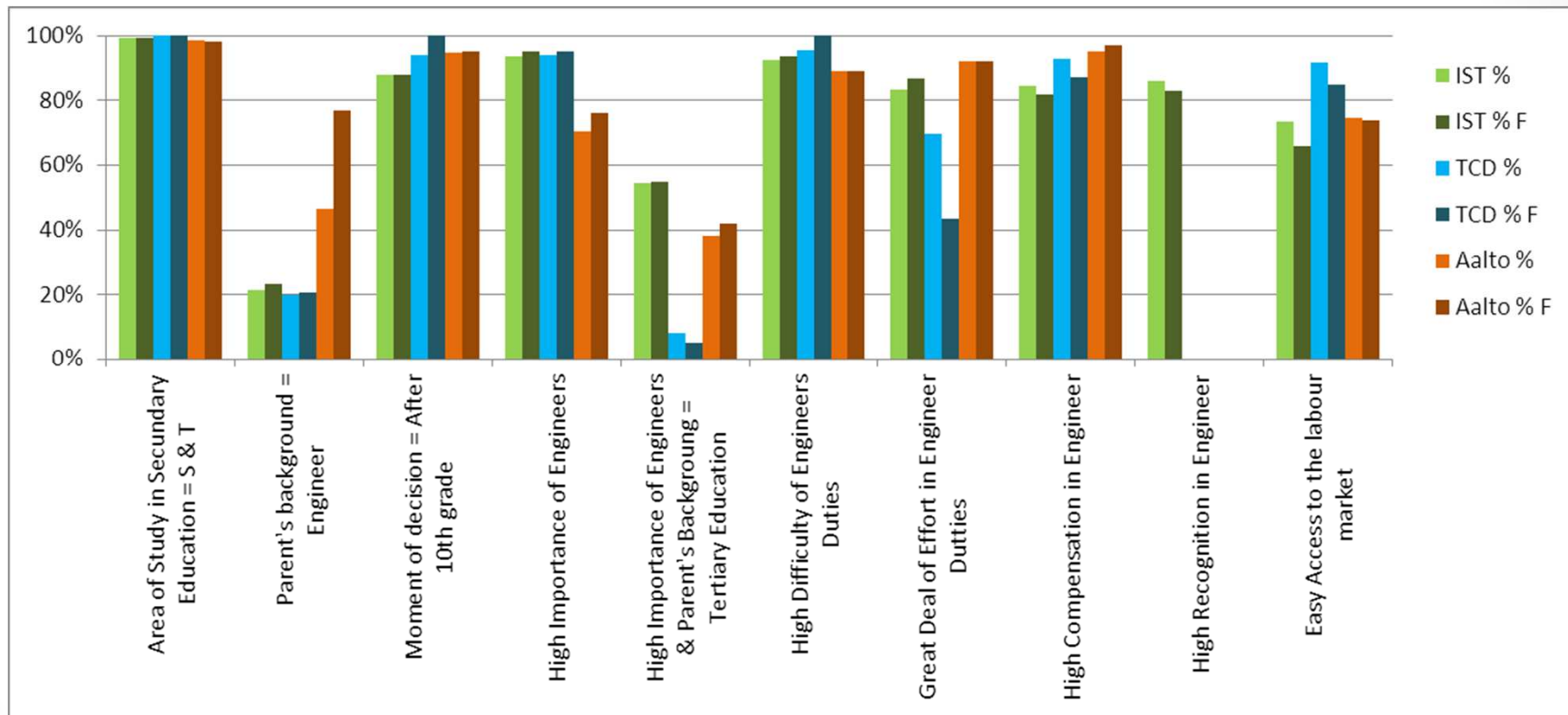
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Preliminary results: entrant students (totals)

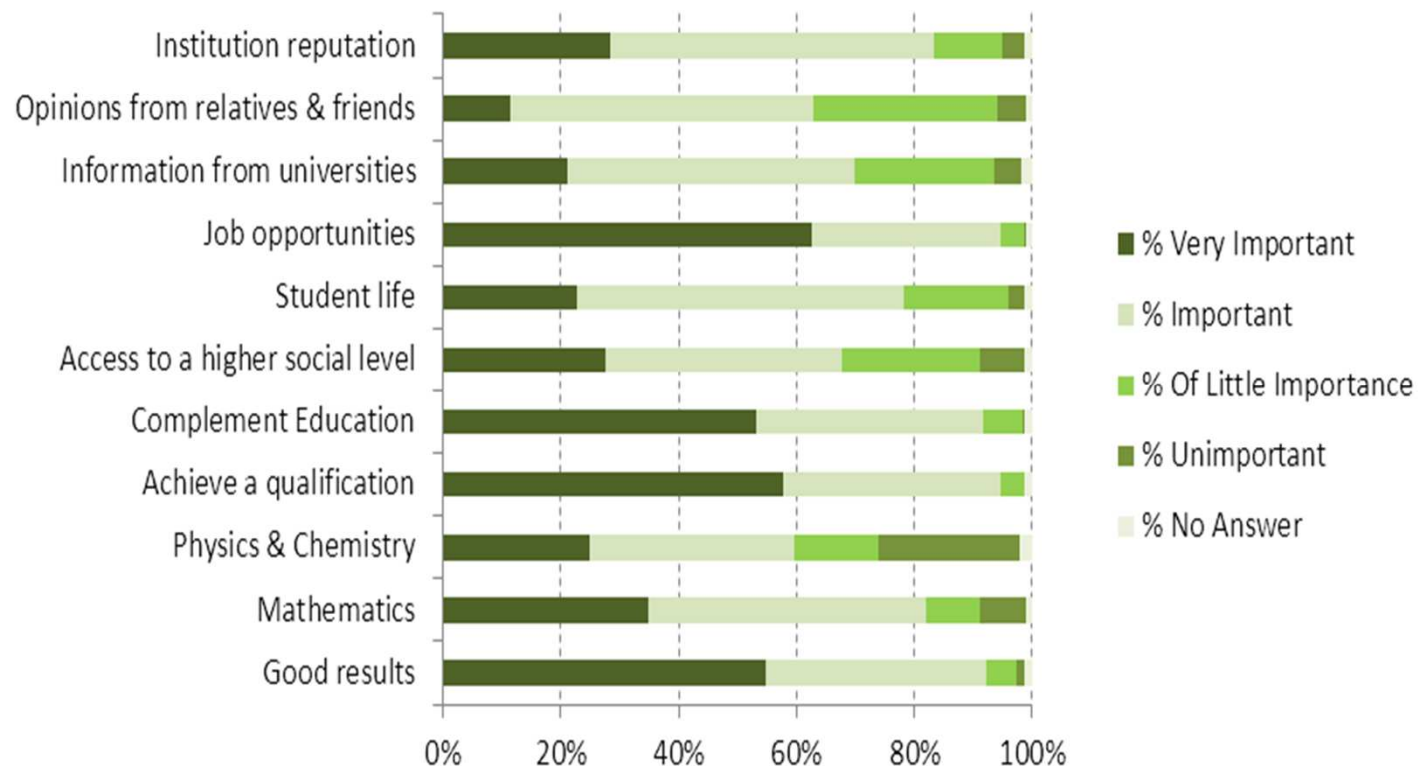


Field Trials/Questionnaires (cont.)

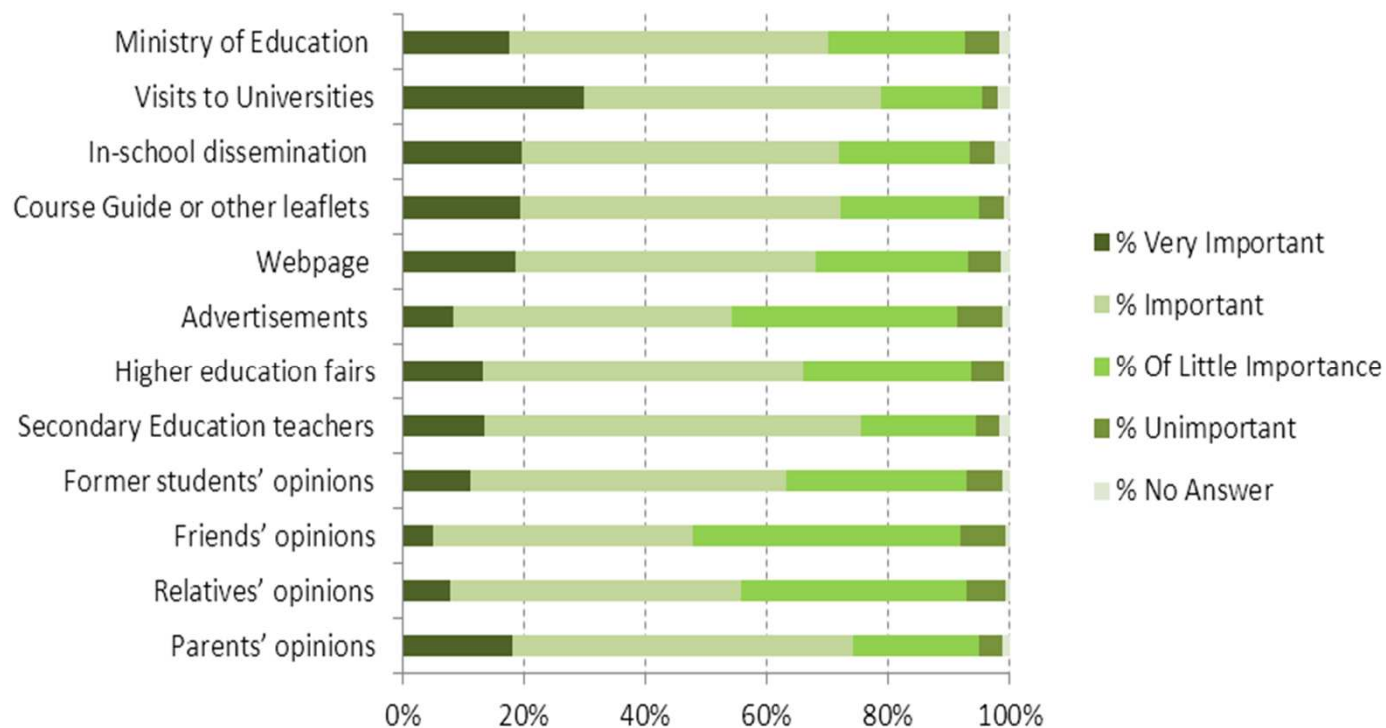
Preliminary results: entrant students (totals vs. female students)



Degree of importance of each of the following factors to the decision to attend a university programme.



Degree of importance of each of the following sources of information for the choice of programme/institution you are attending.



Issues for discussion

For higher education institutions:

- Identification of a similar profile in terms of the factors underlying the choices?
- What are the strategies for attracting students and impact the choices?

For secondary education institutions:

- Mechanisms to support students' choices?
- Sources of information for teachers to support students?

For both:

- How to strengthen the bonds higher / secondary in this context



Thank You