Why are students interested in studying ICT?

Results from admission and ICT students’ introductory questionnaire.

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Admission

- Summer 2013.
- In Admissions Information System (SAIS).
- What are the main reasons that influenced you to apply to Informatics or Information Technology related curriculum?
- Candidates background information.
Curricula

• University of Tartu (UT):
  – Computer Science
  – Computer Engineering

• Tallinn University of Technology (TUT):
  – Computer and Systems Engineering
  – Business Information Technology
  – Informatics

• Estonian Information Technology College (EITC):
  – IT Systems Administration
  – IT Systems Development
  – Information System Analysis
Candidates

- 1807 applications
- 1464 candidates
- 75% men, 25% women
# Competition

<table>
<thead>
<tr>
<th>University</th>
<th>Number of Applications</th>
<th>Number of Acceptance</th>
<th>Competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUT</td>
<td>462</td>
<td>212</td>
<td>2.18</td>
</tr>
<tr>
<td>UT</td>
<td>576</td>
<td>200</td>
<td>2.88</td>
</tr>
<tr>
<td>EITC</td>
<td>769</td>
<td>169</td>
<td>4.55</td>
</tr>
<tr>
<td>Total</td>
<td>1807</td>
<td>581</td>
<td>3.11</td>
</tr>
</tbody>
</table>

Number of candidates: 1464. Real competition 2.56
Why study ICT?

(1) interest,
(2) necessary at work,
(3) continuing studies,
(4) salary,
(5) labour market,
(6) Importance in the future,
(7) field development,
(8) scholarship,
(9) suitability,
(10) likeability,
(11) personal development,
(12) prior experience,
(13) self-realization,
(14) other.
Differences between accepted and non-accepted candidates

• Female candidates had higher probability (45.3%) to get accepted than male candidates (33.9%).
### Differences between accepted and non-accepted candidates (1/2)

<table>
<thead>
<tr>
<th>Category</th>
<th>Accepted</th>
<th>Non-accepted</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>324 (55.8%)</td>
<td>487 (55.3%)</td>
<td>811 (55.4%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Prior experiences</td>
<td>105 (18.1%)</td>
<td>156 (17.7%)</td>
<td>261 (17.8%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Personal development</td>
<td>98 (16.9%)</td>
<td>148 (16.8%)</td>
<td>246 (16.8%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Importance in the future</td>
<td>70 (12%)</td>
<td>122 (13.8%)</td>
<td>192 (13.1%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Labour market</td>
<td>80 (13.8%)</td>
<td>92 (10.4%)</td>
<td>172 (11.8%)</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Field development</td>
<td>44 (7.6%)</td>
<td>94 (10.7%)</td>
<td>138 (9.4%)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Likeability</td>
<td>53 (9.1%)</td>
<td>71 (8.1%)</td>
<td>124 (8.5%)</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>
### Differences between accepted and non-accepted candidates (2/2)

<table>
<thead>
<tr>
<th>Category</th>
<th>Accepted</th>
<th>Non-accepted</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-realization</td>
<td>45 (7.7%)</td>
<td>62 (7%)</td>
<td>107 (7.3%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Continuing studies</td>
<td>34 (5.9%)</td>
<td>54 (6.1%)</td>
<td>88 (6%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td><strong>Suitability</strong></td>
<td>35 (6%)</td>
<td>30 (3.4%)</td>
<td>65 (4.4%)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Salary</td>
<td>22 (3.7%)</td>
<td>26 (3%)</td>
<td>48 (3.3%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Necessary at work</td>
<td>18 (3.1%)</td>
<td>23 (2.6%)</td>
<td>41 (2.8%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Scholarship</td>
<td>1 (0.2%)</td>
<td>3 (0.3%)</td>
<td>4 (0.3%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>138 (23.8%)</td>
<td>259 (29.4%)</td>
<td>397 (27.1%)</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>
ICT students’ introductory questionnaire

- In September 2013
- 517 students’ answers
- 167 from University of Tartu 83,5%
  - Computer Science: 144 94,7%
  - Computer Engineering: 23 47,9%
- 266 from Tallinn University of Technology 63%
  - Computer and Systems Engineering: 45 49,5%
  - Business Information Technology: 83 68,6%
  - Informatics: 138 65,7%
- 84 from Estonian Information Technology College 49,7%
  - IT Systems Administration: 13 37,1%
  - IT Systems Development: 59 64,8%
  - Information System Analysis: 12 27,9%
How large is students’ interest in ICT?

31% Very small
12% Small
56% Medium
1% Big
1% Very big
How informed are students about job opportunities in the ICT field?
How informed are students about the curriculum they are studying?

- 49% Know generally
- 38% Know more
- 12% Know exactly
- 1% Do not know much
How well does the curriculum meet student expectations?

- Very well: 29%
- Fairly: 12%
- Poorly: 2%
- Very poorly: 57%
With what probability do students think they will finish their studies?
How large is the probability that students start working during studies?

![Pie chart showing the probability distribution of students working during studies.](chart.png)
How large is the probability that students work in ICT field after studies?
What kind of jobs do students want?
How many of their friends are also ICT students?
How many of their friends work in the ICT field?
How important have been the following factors been in influencing students to study ICT?

• Three main factors:
  1) Personal contact with IT
  2) No personal contact (salary, labour market)
  3) Continuing IT related studies
What was the ‘breaking point’ that caused interest in ICT?

I like it, it is suitable, can manage it very well, want to commit myself to this filed (emotional point of view).

Later it is possible to earn a good salary.
What was the ‘breaking point’ in your life that led to your interest in IT?

Interest in mathematics
What was the ‘breaking point’ that caused interest in ICT?

No direct ‘turning point’, interest came with time or have been there all along

The field in general is important/promising right now and for the future
What was the ‘breaking point’ that caused interest in ICT?

Everyday work related or other contact with IT

- Computer games: 36%
- 14%
- 7%
- 5%
- 3%
- 4%
- 2%
- 9%
- 5%
- 9%
- 6%
What was the ‘breaking point’ that caused interest in ICT?

- Family member or friend works in IT field, recommended the field or was a role model: 36%
- Computer lessons in school or participation in some other course or competition: 14%
- Other: 7%, 5%, 5%, 4%, 3%, 2%, 9%, 9%, 6%, 5%
What was the ‘breaking point’ that caused interest in ICT?

Other: I had to make a decision, media, relating hobby with IT (e.g. photography)
What was the ‘breaking point’ that caused interest in ICT?

First computer, experience of doing something by myself: solving computer related problems (helping others), building a computer, software developing or trying to make a computer game, webpage design.
Was the ‘breaking point’ also the reason why they chose this curriculum? If NO, then why?

- Someone recommended: 19%
- I like IT or IT related field: 17%
- 5%
- 3%
- Good job, wide range of job opportunities (good salary, interesting, suitable), promising future, lots of IT related opportunities: 16%
- 40%
Was the ‘breaking point’ also the reason why they chose this curriculum? If NO, then why?

- 40%: Curriculum was suitable in personal perspective, develops myself, challenges me
- 17%: Interested in IT or IT related field
- 16%: Other
- 5%
- 3%
- 19%
When did students decide to study ICT?

- Childhood: 35%
- Elementary school: 2%
- High school: 6%
- After high school: 55%
- Other: 2%
Was ICT their only choice? If NO, then what were the other choices?

- Other IT related curriculum: 50%
- Science or engineering: 19%
- Social sciences: 11%
- Medicine: 7%
- Humanities: 5%
- Other or not specified (e.g. going abroad): 8%
Have the students worked in the ICT field before? If YES, then how long?

- Few months: 33%
- Less than a year: 32%
- More than a year: 35%
What kind of work have students done in the ICT field?

- **34%**: Software development
- **22%**: IT support or technical work
- **16%**: Web (including web development)
- **28%**: Other (e.g. selling, testing)
How have working experiences influenced students interests?
Under what conditions will students start working during their studies?
THANK YOU!