

# Why do students choose to study Information and Communications Technology?

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# Introduction

- The role of ICT has increased rapidly in recent years.
- The lack of the labour with good ICT knowledge and skill is a worldwide problem.
- Estonian ICT labour market forecasts a demand of up to 5,600 higher education ICT graduates, but notes that the current supply stands at 4,550 graduates (Jürgenson et al., 2013).
- In Estonia, the total number of the ICT students have increased in past years.

# Introduction

- There is a competition for ICT-related curricula, but about one third of accepted students drop out during the first study year.
- Therefore, admission procedures for recruiting ICT students should be made more effective, so that accepted students are more likely to finish their studies and start working in the ICT field.

# Research questions

- What reasons for studying ICT are expressed by student candidates?
- Which reasons are more frequently associated with the candidates who are accepted to ICT studies versus those candidates who are not accepted?

# Data collection

- July 2013.
- 1464 student candidates.
- Seven ICT related curricula from three main universities where ICT is taught:
  - University of Tartu;
  - Tallinn University of Technology;
  - Estonian Information Technology College.
- Additional question was added in the Estonian Admission Information System (SAIS).

# Methods

- Open-ended question.
- What are the main reasons that influenced you to apply to Informatics- or Information Technology-related curriculum?
- Student candidates perception.

# Qualitative content analysis

- A coding schema of 14 categories was inductively developed.
- Two raters specified the categories until it was possible to reach 80% accuracy.
- Three researchers carried out the data analysis.
- 150 randomly selected answers (11%) were independently analysed to test for inter-rater reliability (Cohen's Kappa = 0.79).

# Competition

N=1464

University	Number of Applications	Number of Acceptance	Competition
Tallinn University of Technology	462	212	2.18
University of Tartu	576	200	2.88
Estonian Information Technology Collage	769	169	4.55
Total	1807	581	2.56

# Reasons for studying ICT

Reason	%
1. Interest	55.4%
2. Prior experience	17.8%
3. Personal development	16.8%
4. Importance in the future	13.1%
5. Labour market	11.8%
6. Field development	9.4%
7. Likeability	8.5%

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# Reasons for studying ICT

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Reason	%
8. Self-realization	7.3%
9. Continuing studies	6%
10. Suitability	4.4%
11. Salary	3.3%
12. Necessary at work	2.8%
13. Scholarship	0.2%
14. Other	27.1%

# *Reasons associated with accepted and non-accepted candidates*

Category	Accepted N=581		Non-accepted N=883		p
Interest	324	55.8%	487	55.3%	>0.05
Prior experiences	105	18.1%	156	17.7%	>0.05
Personal development	98	16.9%	148	16.8%	>0.05
Importance in the future	70	12%	122	13.8%	>0.05
<b>Labour market</b>	<b>80</b>	<b>13.8%</b>	<b>92</b>	<b>10.4%</b>	<b>&lt;0.1</b>
<b>Field development</b>	<b>44</b>	<b>7.6%</b>	<b>94</b>	<b>10.7%</b>	<b>&lt;0.05</b>
Likeability	53	9.1%	71	8.1%	>0.05

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# *Reasons associated with accepted and non-accepted candidates*

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Category	Accepted N=581		Non-accepted N=883		p
Self-realization	45	7.7%	62	7%	>0.05
Continuing studies	34	5.9%	54	6.1%	>0.05
<b>Suitability</b>	<b>35</b>	<b>6%</b>	<b>30</b>	<b>3.4%</b>	<b>&lt;0.05</b>
Salary	22	3.7%	26	3%	>0.05
Necessary at work	18	3.1%	23	2.6%	>0.05
Scholarship	1	0.2%	3	0.3%	>0.05
<b>Other</b>	<b>138</b>	<b>23.8%</b>	<b>259</b>	<b>29.4%</b>	<b>&lt;0.05</b>

# Conclusions

- The most popular reason was interest – which suggests that students are intrinsically motivated to study ICT.
- Less common reasons were associated with external motivating factors, e.g. scholarship and salary.
- Few differences were found between accepted and non-accepted candidates.

# Thank you!

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