EURASHE

Eesti Infotehnoloogia Kolledž

The Estonian Information Technology College

Innovation at Estonian UAS

Knowledge triangle

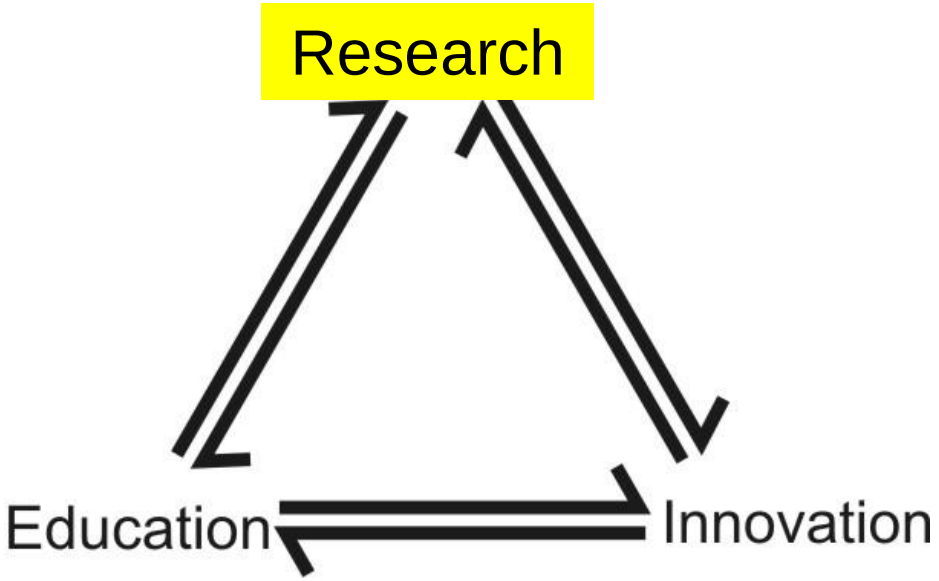
Education

Research

Innovation

Knowledge triangle

The knowledge triangle refers to the interaction between ***research, education*** *and* ***innovation,*** *which are key drivers of a knowledge-based society. In the European Union, it also refers to an attempt to better link together these key concepts, with research and innovation already highlighted by the development of the Lisbon Strategy and, more recently, lies behind the creation of the European Institute of Technology (EIT).*



[Wikipedia, the free encyclopedia]

Thoughts 1/2

- *Exchange and studies abroad are not trouble any more, but employability issues remains.*
  - ***Tehnologically complex world requires very high level graduates.***
  - ***Given limited time, the training has to be redesigned continuously. In limited time limited number of bits and bytes might be learned.***
  - ***We have to carefully plan which bits are learned during study time, how the information is structured, presented, organized, transferred, etc.***
- *by Mr François Biltgen: We need to realize that at least on Continental Europe **the full significance of bachelor degrees is not yet fully understood …***
  It is essential that degrees testify to abilities and capacities that go beyond the immediate needs and at the same time degrees do not lead to unemployment.

Thoughts 2/2

- ***Distance education popularity is on growth. When the number of graduates of secondary education is dropping (in Estonia) we see enrollment to distance education programs at UAS increasing.***
  - ***General LLL acceptance***
  - ***Fuzzy academic bachelor definition - no clear entry to employment***
- ***There is no need to run amok for UAS on implementing Master programs – there is plenty of challenging work at the first level of HE.***
  Still – HE (actually all education) is a complex where levels are interrelated and feedbacked.
  Smart overlapping of HE levels is acceptable and even inevitable.

Innovation: Tallinn entrepreneurship awards 2010

- ***Applied science project 2010 (in cooperation with Estonian Art Academy) – Helmi - a set of temperature preserving porcelain dishes*** *(author Kirsi Miettinen)*
- ***Applied science project 2010 (in cooperation with Tallinn University of Technology) – direct current converter for renewable energy applications*** *(Dmitri Vinnikov, Madis Lehtla, Indrek Roasto, Tanel Jalakas, Hardi Hõimoja, Anna Andrijanovitš)*
- ***Applied science project 2010 (in cooperation with Tallinn University) – 3D game construct analysis*** *(Mare Müürsepp, Triin Rand, Marelle Mangus)*

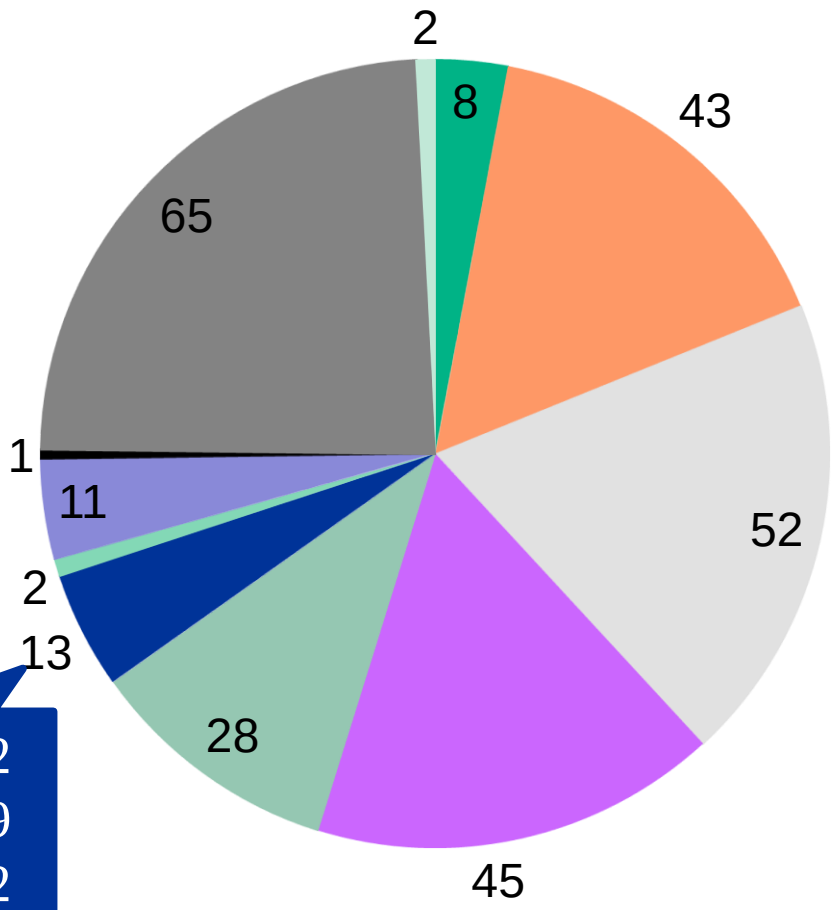
- ***Where are Estonian UAS?***

Innovation grants in Estonia

- ***Enterprise Estonia is issuing***
  - ***The product development grant*** *for the entrepreneurs and universities for developing the products and services with high added value.*
  - ***The competence centre grant*** *for creating the good products and services in cooperation with entrepreneurs and scientists.*
  - ***The innovation voucher grant (~3200€)*** *for increasing competitiveness of Estonian SMEs through transfer of knowledge and technology, expansion of cooperation with R&D institutions and increase of capability of protection of intellectual property.*

- ***Are they for Estonian UAS?***

Innovation voucher grant



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Experimental Labs
Patent Office
Patent Agencies
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EITC	- 2
TKTK	- 9
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Education

- *In Estonian UAS nominal education time is typically 3 years (in rare cases up to 4,5 years)*
- *The qualification awarded upon completion of the programme is Rakenduskõrgharidusõppe diplom (Diploma of Professional Higher Education)*
- *The qualification gives access to master's programmes*
- *GREAT.*

- *But isn't study time too short (3 years) to guarantee knowledge, skills and attitude at level required and expected by employers/enterprises?*
  - *We receive opposite signals…*
  - *We are forced continuosly seek out-of-box solutions*

3-year applied bachelor

- ***Like a dancer, who is rotating differently for every observer and even differently during different observation times***
- *a key – right or left brain hemisphere dominance*
- *another key – not enough information*

[The Right Brain vs Left Brain test Source: AAP]

Concerns

- *Estonian UAS education is fragmented (everyone in own domain and territory)*
- *In common areas we often do*
  - *invent the wheel*
  - *have not heterogeneous research*
  - *waste of human, financial, time resources*
  - *trade instead of cooperation*
  - *loose opportunities due to smallness*
  - *are silent because of lack the solid ground*

Positive trends

- ***Very high employability among UAS graduates – "licence to work"***
- ***Internationalisation – Erasmus etc.***
- ***Openness***
- ***Mutual understanding***
- ***Cooperation***
  e.g. Rectors' Conference of UAS of Estonia (RCUAS) – 13 members, 1/3 student community and increasing

References

- ***Bologna 2010-2020 by Mr François Biltgen, Minister for Culture, Higher Education and Research Minister for Labour and Employment Luxembourg (PDF)***
- ***EU strategy 2020 (PDF)***
- ***Enterprise Estonia - http://www.eas.ee***
- ***RCUAS – http://www.rkrn.ee***

THANKS!