Student's Motivation Improving

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Agenda

- Info about Transport and Telecommunication Institute (TSI)

- CCNA Curriculum in TSI study program

- The dropout problem

- Motivation ingredients

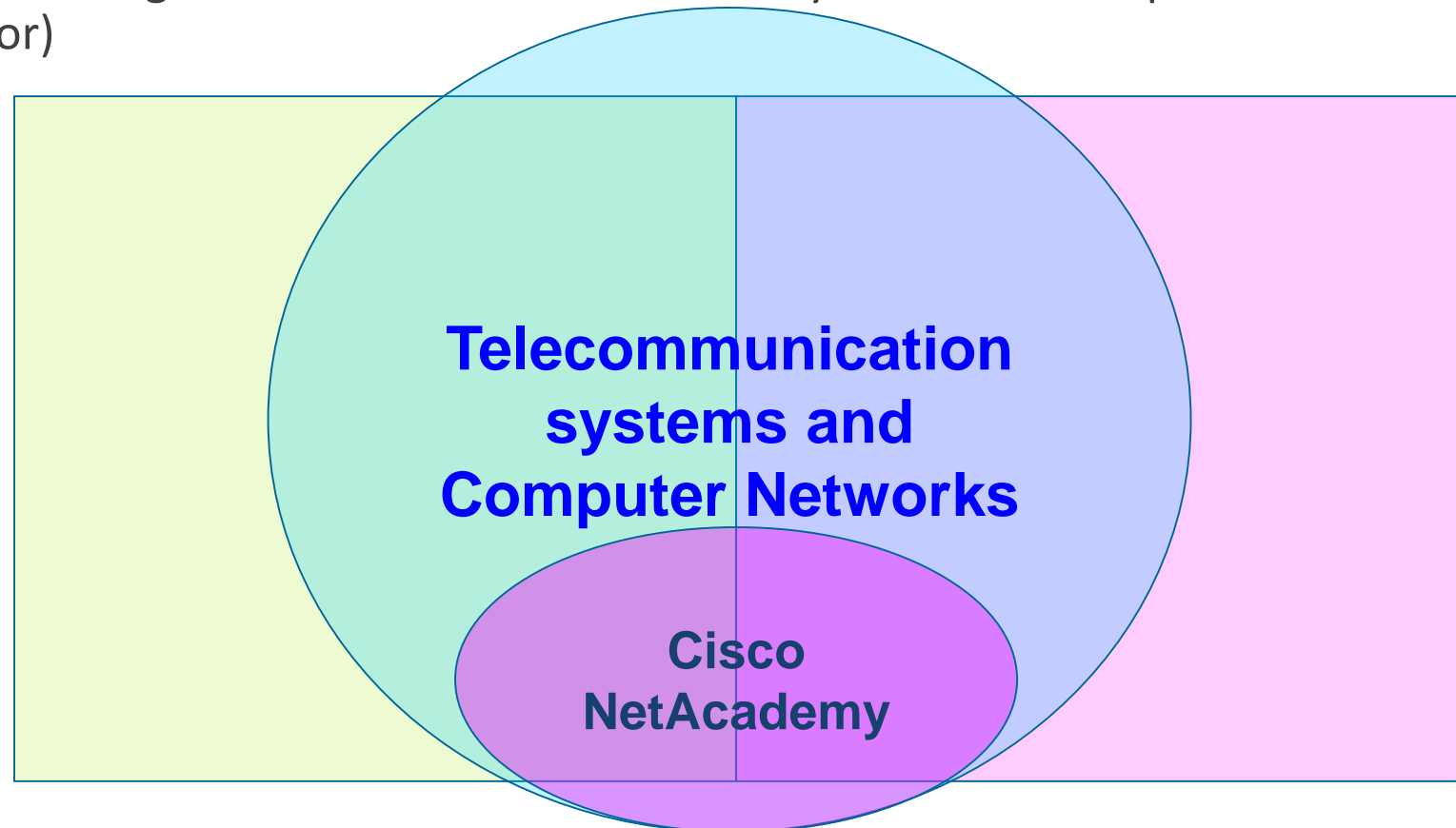- TSI activities and strategies

About myself

- Networking Lab Head, Cisco NetAcad Instructor and Contact at Transport and Telecommunication Institute, Riga, Latvia www.tsi.lv

- Network Engineer at Runway International (BPO service provider) www.runway.lv

- NetAcad Certificates of Recognition:
  - Instructor Excellence Expert - 2012
  - Cisco Women in Networking - 2012
  - 5 Years of Service - 2013
  - Instructor Excellence Expert – 2013

- From April, 2014 in maternity leave ☺

TSI

- Transport and Telecommunication Institute (**T**ransporta un **S**akaru **I**nstitūts – **TSI** in LV)

- The academic programs: transport and logistics, computer sciences, electronics and telecommunication, economics and management, aviation transport.

- Higher professional education of first and second levels, Bachelor, Master and Doctor degrees.

CCNA in TSI

CCNA Curriculum is integrated to "Telecommunication Systems and Computer Networks" Study Program (Bachelor)
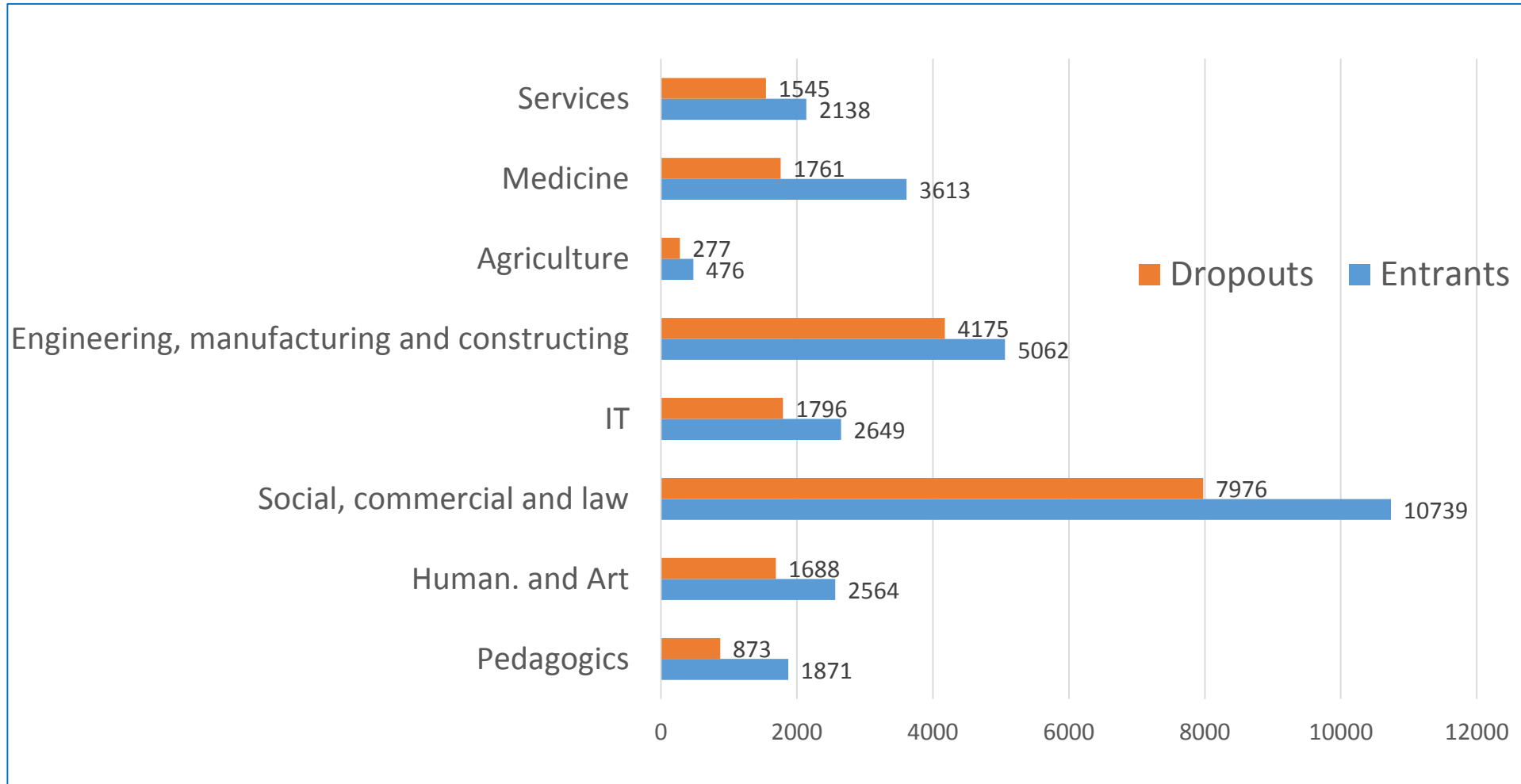
Telecommunication systems and Computer Networks

Cisco NetAcademy

Number of TSI Students

Total Number - 1697

Transport and Logistics — 656

Computer Science — 468

Economics and Management — 308

Electronics and Telecommunication — 139

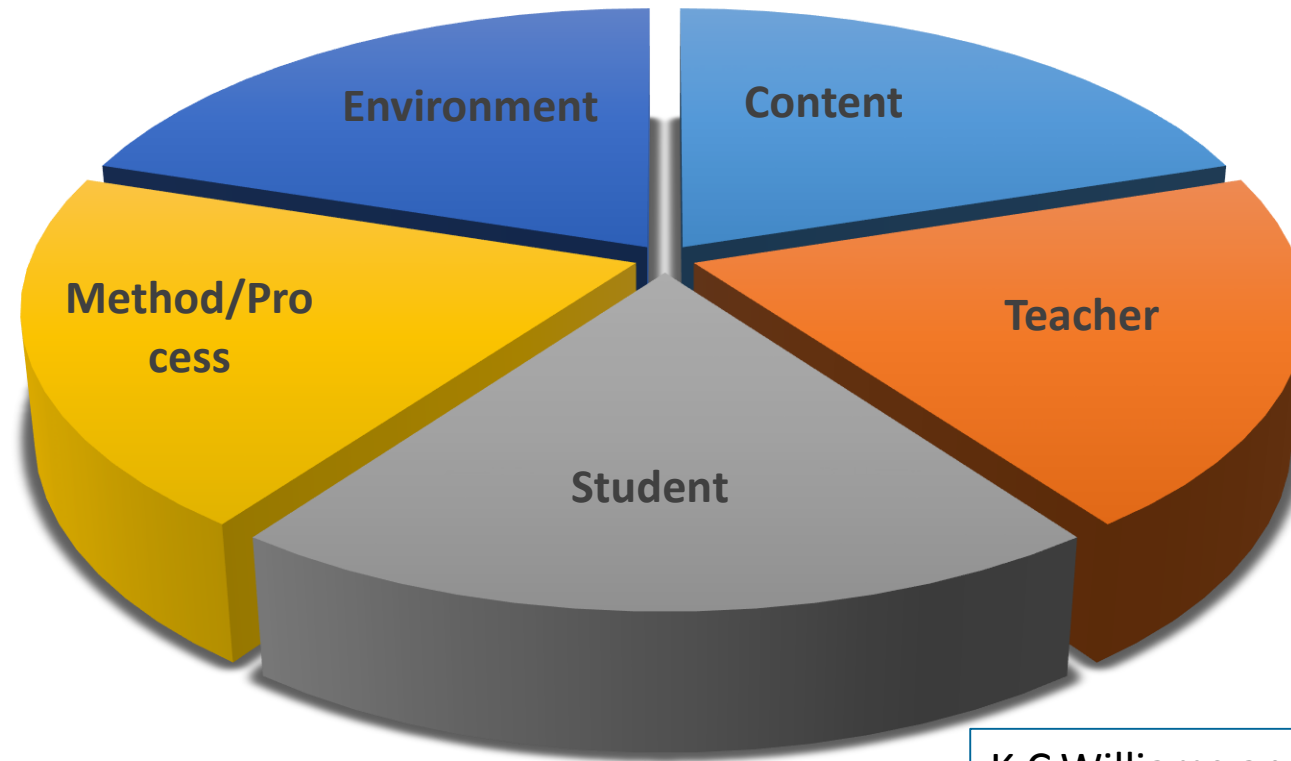(Axis: 0, 100, 200, 300, 400, 500, 600, 700)
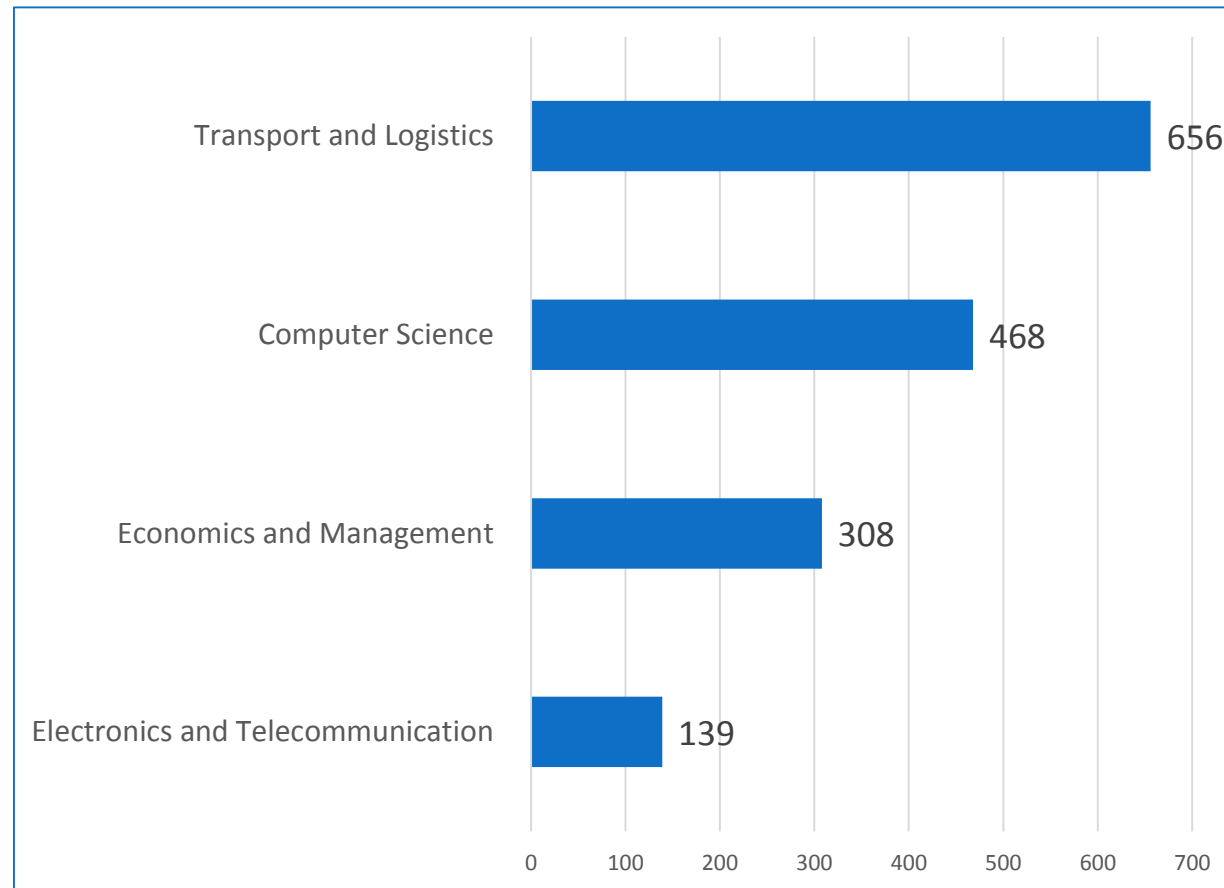
Entrants/Dropouts Number in Latvia, 2014/2015 st.y.

Ministry of Education and Science

Key Ingredients of Students' Motivation

K.C.Williams and C.C.Williams.
Research in Higher Education Journal

1. Student

- The desire to be involved;

- Curiosity: find out more about their interests;

- Challenge: figuring out the complexity of a topic;

- Social interaction: creating social bonds;

- Compliance: to meet another's expectation, to do what one is told;

- Recognition: to be publicly acknowledged;

- Competition;

- Work avoidance: avoid more work than necessary;

- Public speaking competence.

Interesting to Note

➢ The nontraditional students report higher levels of intrinsic motivation than traditional students. (Dean and Dagostino, 2007; Daniels, 2010; Bye, Pushkar, and Conway, 2007; Afzal, et al., 2010)

o Do not immediately continue education after graduate from high school
o Attend college/university only part time
o Work full time (35 hours or more per week)
o Are financially independent
o Have children or dependents
o Are a single parent

Activities

❑TSI Career Day is organized annually since 2004. This is a day when students can meet the representatives of enterprises in the exhibition centre and find job or practical placement, as well as get information about particular companies.

❑ Different workshops are held, for example, how to write a CV, cover letter and how to prepare for a job interview etc.

❑TSI Knowledge Sharing Center: Student business incubator gives students the opportunity to implement their business ideas using TSI and external resources and incubator privileges.

❑ Competitions: Programming, Networking, Robotics…

❑ Recognition

Official presentations of CCNA Certificates of Completion
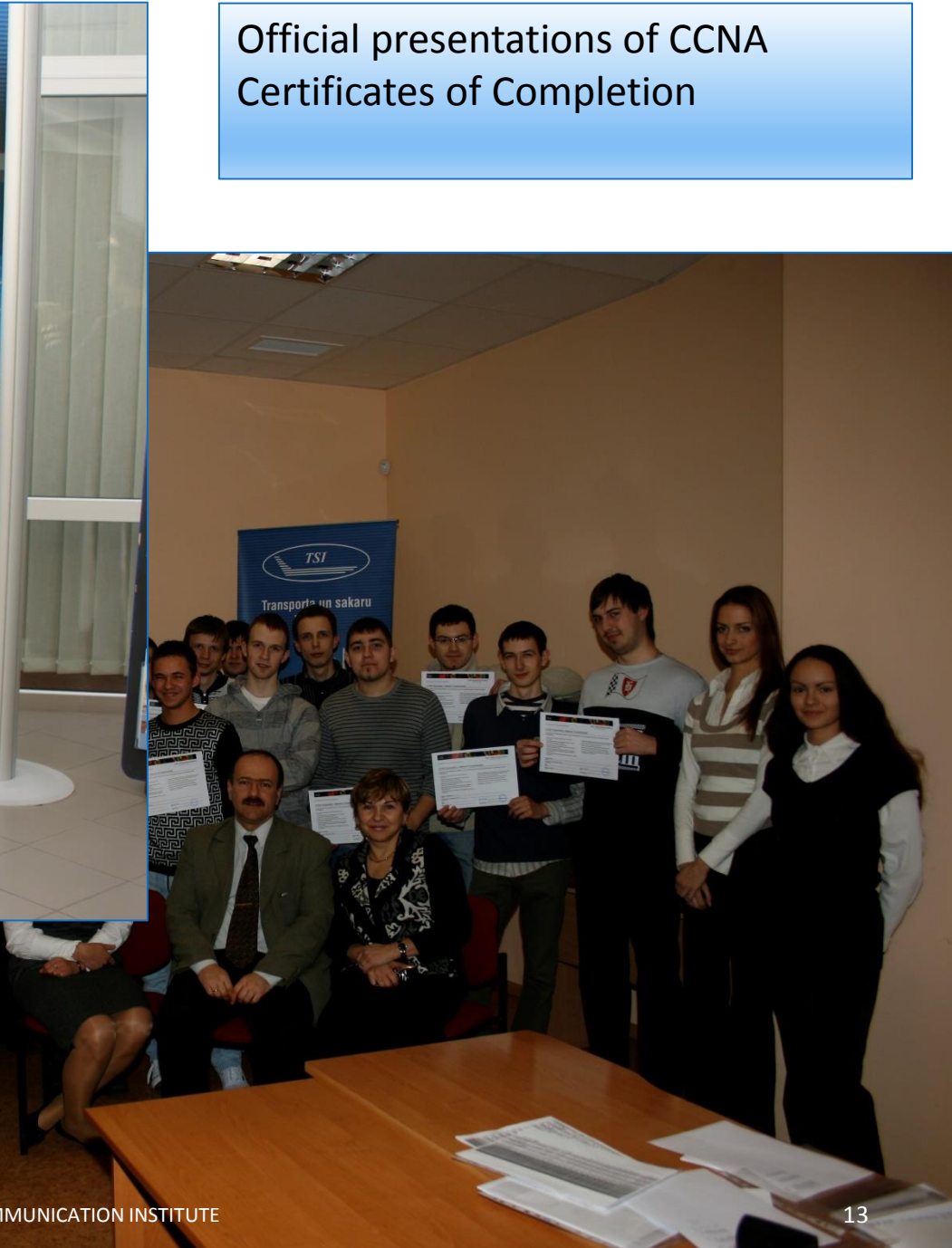
2. Teacher

❑ **Subject knowledge and motivational level.** Students are motivated by the teacher's knowledge of the subject matter, the teacher's sense of humor, the motivational level of the teacher, high quality of teaching, intellectual challenge, engagement in class, and academic help outside of the class.

❑**Teacher skills.** Teachers with greater expertise and experience.

❑**Teacher qualifications.** Educators need to acquire new qualities and continue to grow and evolve as they are role models for the students.

❑ **Enthusiasm.** When the teacher is more enthusiastic about a topic, then the students will be more inclined to believe that the topic has value for them.

Teacher

TSI CCNA Instructors
Jelena Revzina
Jelena Baranova
Nikolays Kudrins

Activities

- Webinars

- IPD Weeks

- Conferences

- Pedagogical workshops

- Annual Inter-Higher School Scientific and Educational Conference **Actual problems of Education**

3. Content

❑ **Students experience success and achievement.** Some techniques for ensuring this success include: state the goal for the lesson; provide simple and clear explanations; ask the students to express their comments, questions, and ideas; question the students; provide hand-on activities as often as possible; and assessment tasks should be flexible. (Palmer, 2007)

❑ **Student choices.** Some choices might include: who they work with, what book to read, their assignment topic, how the assignment will be presented, and when the assignment is due. However, when offering choices, instructors should construct options that meet the students' needs.

❑**Timely and relevant to real life.** Content should be relevant and useful to the student in his or her life. Tasks that are meaningful to the students' real life motivate them. (Frey and Fisher, 2010)

❑ **Novelty.**

1 Semester: Introduction to Speciality (A), Computer Systems Structure (A), Physics (A), Programming (A), Higher Mathematics (A), **Computer Networks** (A), Labour Safety (A), Civil Defence and Environment Protection (A).

2 Semester: Computer Networks (A), Electrical Circuits Theory (A), Programming (A), Higher Mathematics (A), Physics (A), Computer Systems Structure (A).

3 Semester: Numerical Methods (A), Electrical Circuits Theory (A), Discrete Mathematics (A), **Computer Networks** (A).

4 Semester: Signals and Circuits (A), **Computer Networks** (A), Electronics and Microelectronics (A), Database and Data Banks (A), Probability Theory and Mathematical Statistics (A)

5 Semester: Philosophy (A), Theory of Automatic Control (A), Theory of Information Coding and Transference (A), Electronics and Microelectronics (A), Introduction to Stochastic Processes Theory (B), Computer Networks Analysis and Design (B), Foreign Language (C), Principles of Law (C)

6 Semester: Electrical Circuits Theory (A), Software Engineering (A), English for Engineers (A), Digital Telecommunication Systems Technologies(A), Queueing Theory (B), Modelling of Systems (B), Politology (C), Social Psychology (C)

7 Semester: Telecommunication Systems Theory (A), Group Project (A), Project Management (A), Network Programming (A), English for Engineers (A), Computer Networks Applied Technologies (B), Enterprise Basics (C), Management Economics Fundamentals (C)

8 Semester: Optical Networks(A), Mobile and Satellite Telecommunication Systems (A), Bachelor's Thesis and its Defence (A), **Computer Network Security** (B), Office Work and Business Correspondence (C), Business Latvian (C).

Subjects analysis

❑**Very interesting:** Computer Networks, Computer Network Security, Programming, Optical Networks, Computer Networks Analysis and Design, Computer Networks Applied Technologies, Databases and Data Banks, Project Management, Network Programming

❑ **Satisfactorily:** Mobile and Satellite Telecommunication Systems, Computer Systems Structure

❑ **Tolerantly:** Electronics and Microelectronics, Queueing Theory, Higher Mathematics, Discrete Mathematics

❑ **Horror:** Numerical Methods, Signals and Circuits, Theory of Automatic Control, Electrical Circuits Theory, Probability Theory and Mathematical Statistics, Introduction to Stochastic Processes Theory, Telecommunication Systems Theory

4. Method/Process

❑ **Experiential learning or self-learning.** Experiential learning is when an individual is actively involved with concrete experience.

❑ **Mutual goals or objectives.** Students need to see the point of it all and know what they personally will get out of the educational process.

❑ **Flexible and stimulating just-in-time training and interactivity.** The key to effective use of this training is interactivity. That is, it is important to focus on the material to be learned and on how the students interact with it.

❑ **Casework.** In specific, case relevance can be based on relevance of the topic, importance of the topic, application to career interests, and integration of the subcomponents of the topic, e.g., business functional areas. Students feel that local cases provided a more realistic learning experience and helped them learn about entrepreneurship.

❑ **Encouragement and praise.**

Activities

☐ Workshops

☐ Team Projects

☐ Case Studies

☐ Troubleshooting Labs

(Make Trouble for classmate)

5. Environment

❑ **Create an effective environment.** Overall approach to material presentation and development; using applications relevant to students' everyday experiences or to their chosen career fields; the use of good business or organizational problems rather than contrived examples…

❑ **Engagement and considering student and teacher opinions.** The learning environment should take into consideration the opinions of students and teachers in arranging the environment.

❑ **Teamwork.** An environment of teamwork can contribute to learning. All teams need four competencies: generate and refine ideas, organize and integrate work, sustain group spirit, and manage boundaries.

❑ **Distance and online learning.** Distance and online communication should be clear, timely, friendly, and flexible. Distance and online learning may be as effective as traditional learning in terms of student motivation, attitudes, and achievement.
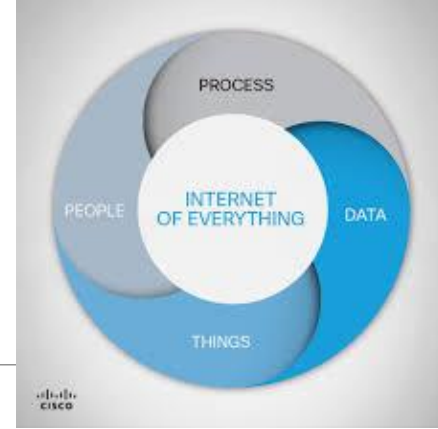
TSI Cisco Lab

Grades of Bachelor Thesis
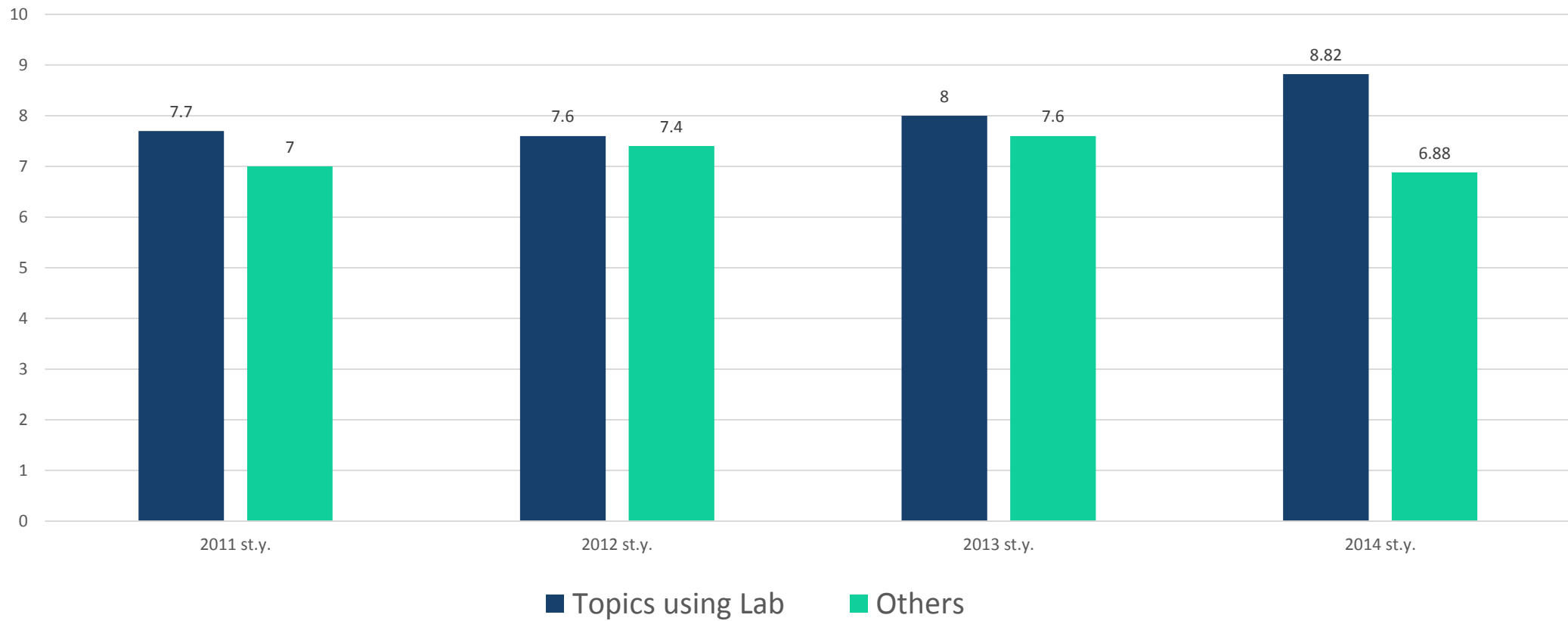
Main Directions

1. The revision of the study program in terms of interesting subjects and more clear interdisciplinary connections.

2. More programming.

3. **IoE**

4. ?

Remark: CCNA Curriculum (1 and 2) will be integrated to the Computer Science (Bachelor) program at the request of students.

Thank you!

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