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## **COST Action 15221**

**We ReLaTe: Advancing effective institutional models towards cohesive teaching, learning, research and writing development.**

**Institutional models towards cohesive teaching, learning, research and writing development – case study.**

**The Transport and Telecommunication Institute in Riga (Latvia)**

### **Introduction**

The research in the Transport and Telecommunication Institute in Riga in Latvia included: investigation of the formal model for supporting these four areas; investigation of the existing practices for supporting these four areas; investigation of the work performed by the office and/or offices, which are managed by dedicated staff, whose primary role is to provide institution-wide support for the four key activities; discussion of pros and cons of the existing system with colleagues from Transport and Telecommunication Institute (especially with the colleagues from the Department of Humanities)

I used the case study template (profile of the institution; overview of the centralized supports of writing, research, learning and teaching; interoperability and synergies across the supports; opportunities associated with this model; challenges associated with this model; professional reflections and references). The interview with prof. Yulia Stukalina who is the expert in these issues was very helpful in the aims of my STSM. I have also prepared the questionnaire to receive the Institute's employees opinions connected with the centralized supports of writing, research, learning and teaching. The other important sources of information about the institution were documents published in the internet.

### **Profile of the institution**

Transport and Telecommunication Institute (lat. Transporta un sakaru institūts – TSI) is the university-successor of the legendary RKIIGA (Riga Red-Banner Civil Aviation Institute) and RAU (Riga Aviation Institute). In the present-day appearance Transport and Telecommunication Institute was established in 1999. The Institute is the only one private technical college university type in Latvia.

Picture of the Transport and Telecommunication Institute



Source: the picture taken by M. Marczewska-Rytko

It offers all levels higher education: bachelor degree, master degree and doctoral dissertation. The courses are possible in Latvian, English and Russian. The Institute has received permanent accreditation in Latvia as a higher education institution. The Institute provides with the academic programs in the following directions: transport and logistics, computer sciences, electronics and telecommunication, economics and management, aviation transport. In June 2013 all education directions of TSI received accreditation for the maximum period – 6 years.

It is worth to add that the Institute is the only one among private colleges included in the list of very good scientific institutions. According to scientific results it takes second place among private institutions of higher education in Latvia. According to the Institute data, total amount of institute graduates is more than 7500 and current amount of students is about 3000. There are international students from India, Kazakhstan, Moldova, Russia, Uzbekistan, Ukraine, Azerbaijan, UK and other countries. There are also ERASMUS students from Spain, Poland, Bulgaria, Turkey, Slovakia and other countries.

### **The existing support system for research, writing, teaching and learning in the Transport and Telecommunication Institute**

The centralized support means an office or center, which is managed by dedicated staff, whose primary role is to provide institution-wide support for the four key activities: teaching, learning, research, and writing. According to this definition generally the support system in the Transport and Telecommunication Institute is centralized.

The Institute includes three faculties (the Faculty of Computer Science and Telecommunication; the Faculty of Management and Economics; the Faculty of Transport and Logistics (there is also Latgalian branch); six departments/Chairs (Department of Software Engineering; Mathematical Methods and Modelling Department; Electronics and Telecommunications; the Department of Transportation and Logistics; Aviation Transport Department; the Department of Economics, Management and Finance; the Department of Humanities).

The International Relations Department provides support for students and academic/attending staff who want to participate in the ERASMUS+ mobility programme.

In TSI, there is the Multimedia Laboratory, which is equipped with video-recording and editing equipment complex, which allows creating educational, informative and commercial videos. The filming process of video lectures for the purposes of distance studying, sound recording for video materials and their preparation for placing into e-studying environment takes place at the filming studio.

There are three educational and research centers in TSI:

1. Academic and Professional Aviation Center (APAC). Academic and Professional Aviation Center (created in 2008) is a kind of the structural unit of the Institute to implement all types of aviation education (conducts basic knowledge training for category B1 in technician mechanics and category B2 in technician avionics). The classrooms are equipped with multimedia facilities, workshops with modern equipment and tools necessary for the training of aviation specialists. Laboratories of radio electronics and electrical engineering are available.

2. The Center of Telecommunications, Electronics and Robotics (created in 2013) includes nine laboratories (industrial robots, mobile robots, physics and electrical machines, modeling of electronic systems, embedded systems and digital signal processing, industrial automation, subsurface radiolocation, robotics and students' research work, designing and prototyping, telecommunications and electro-optical systems, electronics). Mentioned laboratories are equipped with the latest software and hardware widely used in academic and research activities. Each laboratory is a collection of contemporary technical, software and methodological maintenance.
3. Life-long Education Center runs courses for outside people (payable) and for inside staff and teachers (reduced payment).

For supporting research and innovation, TSI has the Research and Development Department. Its tasks are as follows: promotion the efficient use and development of scientific potential of the Institute; monitoring the needs of the market through active innovative activities with entrepreneurs; creating the environment of continuous partnership of industrial enterprises around the Institute; expansion of the international scientific and technological cooperation; development of infrastructure to further commercialization of software and technical provision; performance of scientific research; cooperation of professors and lecturers in finding, writing and, subsequently, management of projects on European, national and municipal level; organization of scientific (theoretical and practical) conferences; provision of Institute's management with necessary information to determine the prospects for the development of the Intitute; presentation of scientific activities in the state, municipal and private institutions; record-keeping and preparation of statistical data and summary reporting on research and innovation activities. There are head of the department, Specialist in Doctoral Programme, 3 project managers, research referent officer.

The Library of Transport and Telecommunication Institute has recently been reconstructed in a modern way to provide full support for students and academic staff. TSI Library reading-hall for students and teachers is well-stocked with up-to-date books and with a range of useful professional journals. The library also provides access to a wide range of electronic databases. There is also a computerized reading-hall, where the students have an opportunity to practice on their own. Most of TSI Library working places for students are computerized.

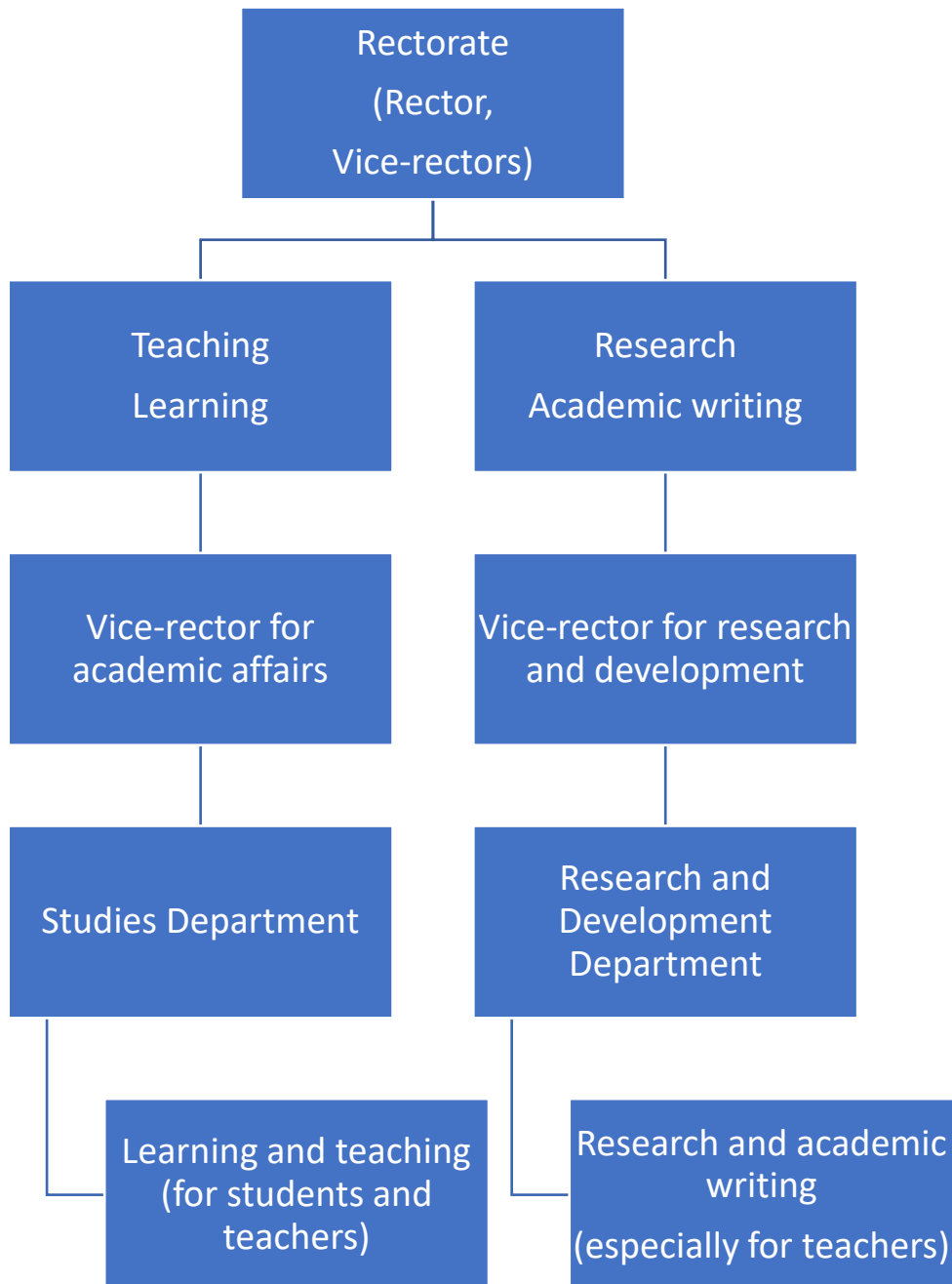
The Life-long Education Center provides the following study courses:

- Non-formal education program "English Terminology in the Electric Power Industry" (adult education)
- Non-formal education program "Financial and Information Competence for Adults"
- Non-formal education program "Green Business Ideas for Starting a Small Business" (adult education)
- Non-formal education program "Professional English for Mechanics" (adult education)
- Non-formal education program "Sustainable Using of Resources in the Enterprise" (adult education)
- TTI Lifelong Education Centre offers non-formal education programme " Data Science: from Data to Product "
- TTI Lifelong Education Centre offers courses - Computer Networks: Cisco Certified Network Associate (CCNA) Routing and Switching,. Module 1: Introduction to Networks;

Module 2: Introduction to Networks; Module 3: Introduction to Networks; Module 4: Introduction to Networks; Non-formal Education Programme "Introduction to R for Data Analytics"

- Language courses: Chinese Language Courses; International Business English
- Legal Aspects of International Trade and Aviation
- Requirement Management Methods
- Strategic and Change Management in Aviation.

The structure of the centralized system of support in the Transport and Telecommunication Institute is given below.



Source: on the basis of official information available on the web and an interview conducted with prof. Yulia Stukalina

## Challenges, opportunities and effectiveness of the system

### Challenges:

- strong competition for European research grants; as a private high school the Transport and Telecommunication Institute does not receive money from the government;
- strong competition between the Transport and Telecommunication Institute, other private universities and state universities.

### Opportunities:

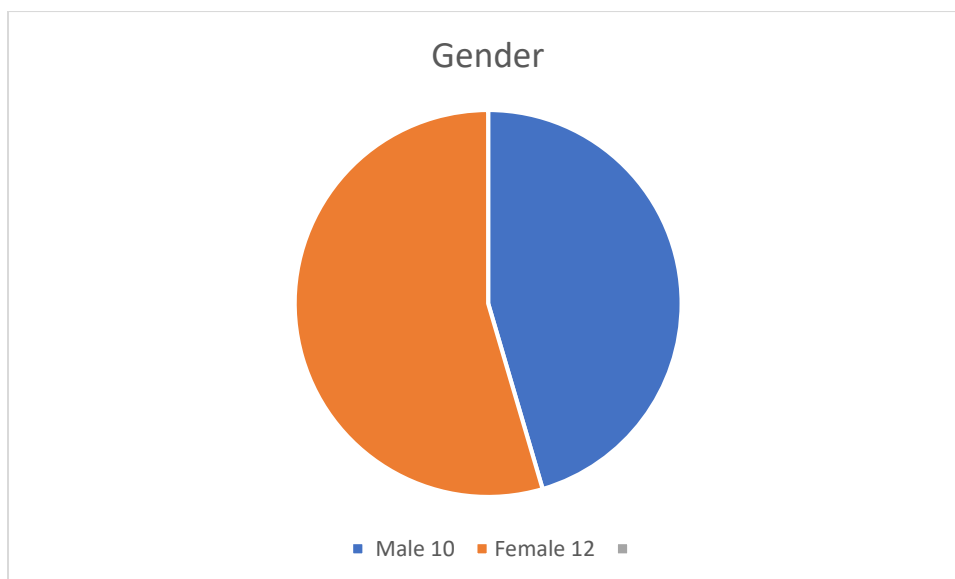
- professional profile of the Institute;
- professional training courses; experienced staff and teachers; courses in 3 languages;
- big number of international research projects; professional equipment and very good laboratories (European grant for laboratories).

Effectiveness: the system is quite effective: active international cooperation; international conferences and symposiums; a lot of research grants; foreign students (including ERASMUS students) from different countries (Bulgaria, Spain; India; Kazakhstan; Pakistan; Russia; Uzbekistan; Ukraine; Poland; Turkey; Slovakia; Belarus; Egypt, etc.).

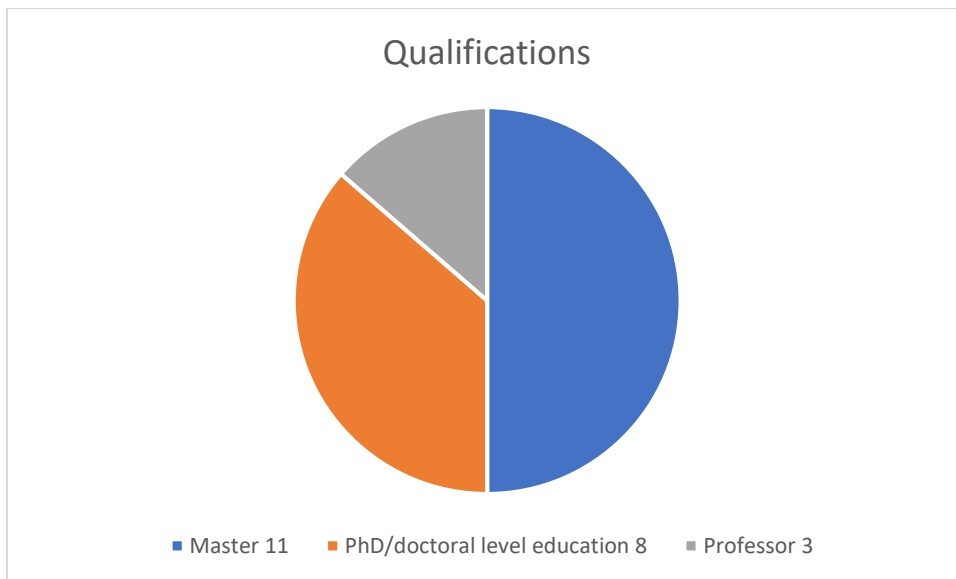
## The results of the questionnaires

The survey was prepared on the basis of a much longer questionnaire developed as part of the COST Action CA 15221 – Advancing effective institutional models towards cohesive teaching, learning, research and writing development. The questionnaire was composed of 16 questions: 13 closed questions and 3 open questions. 22 people completed the survey. My STSM took place at the end of the semester and there were not many employees at the Institute.

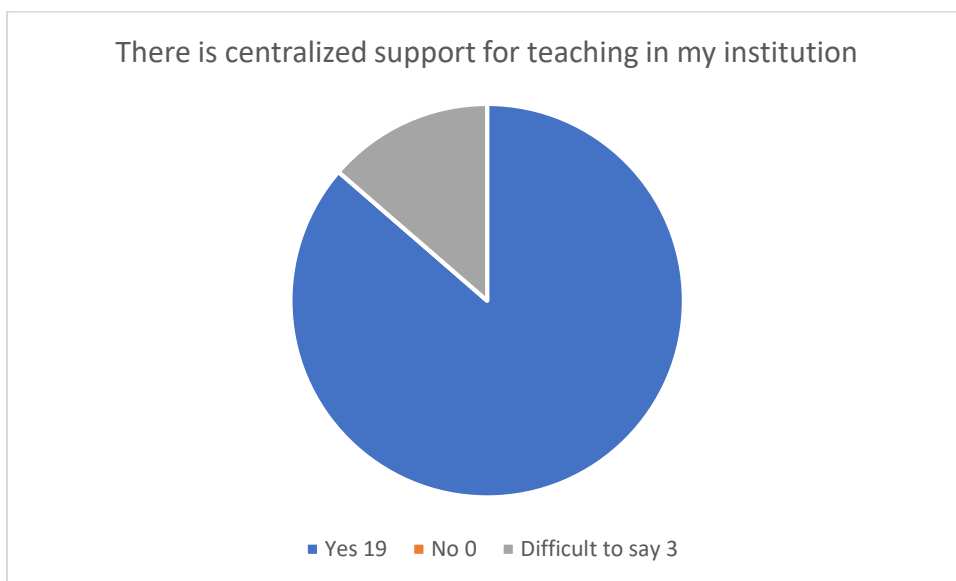
### 1. Gender



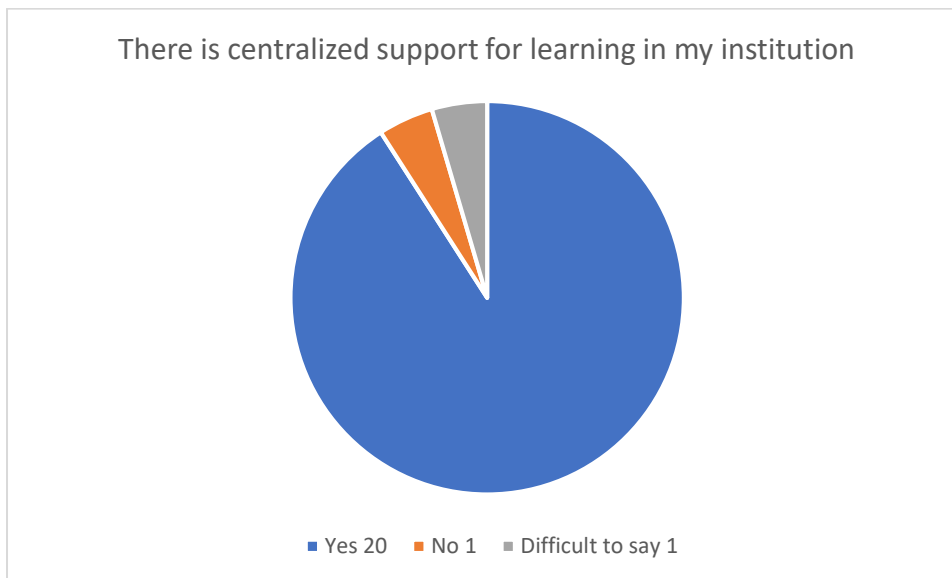
## 2. Qualifications



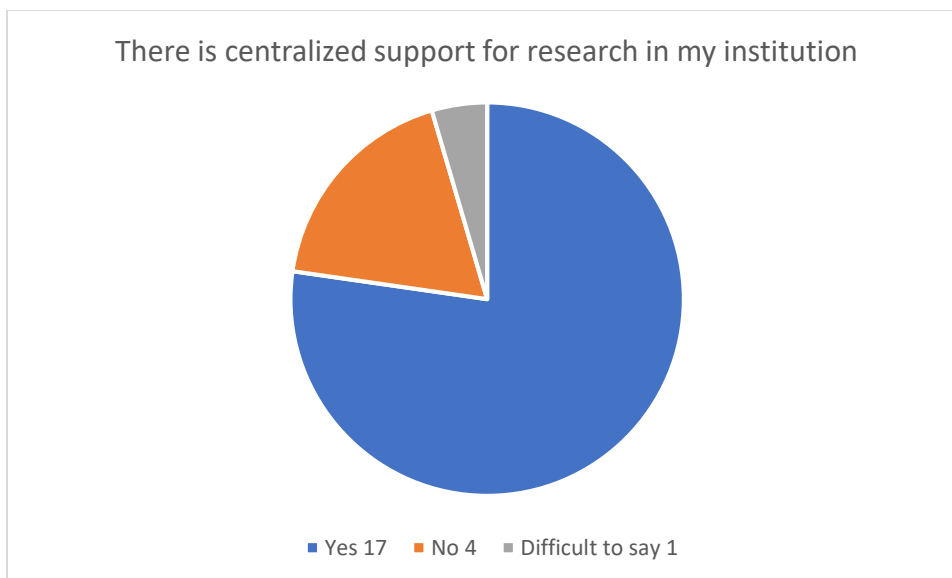
## 3. There is centralized support for *teaching* in my institution



4. There is centralized support for *learning* in my institution

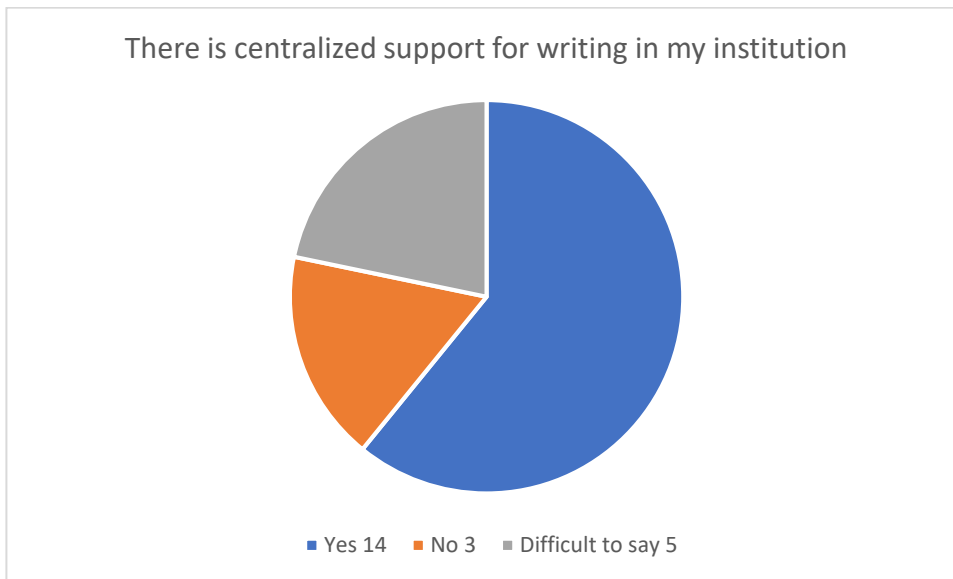


5. There is centralized support for *research* in my institution

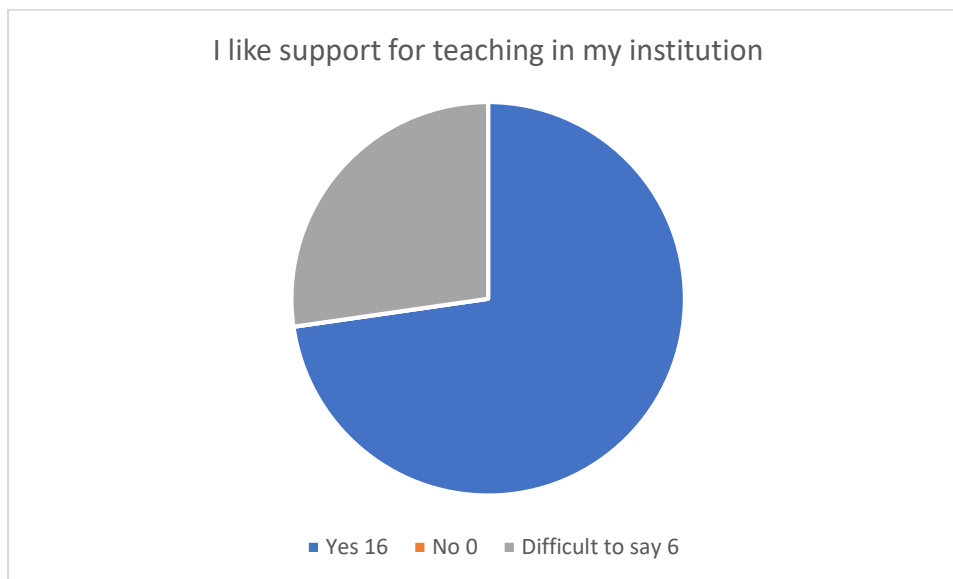




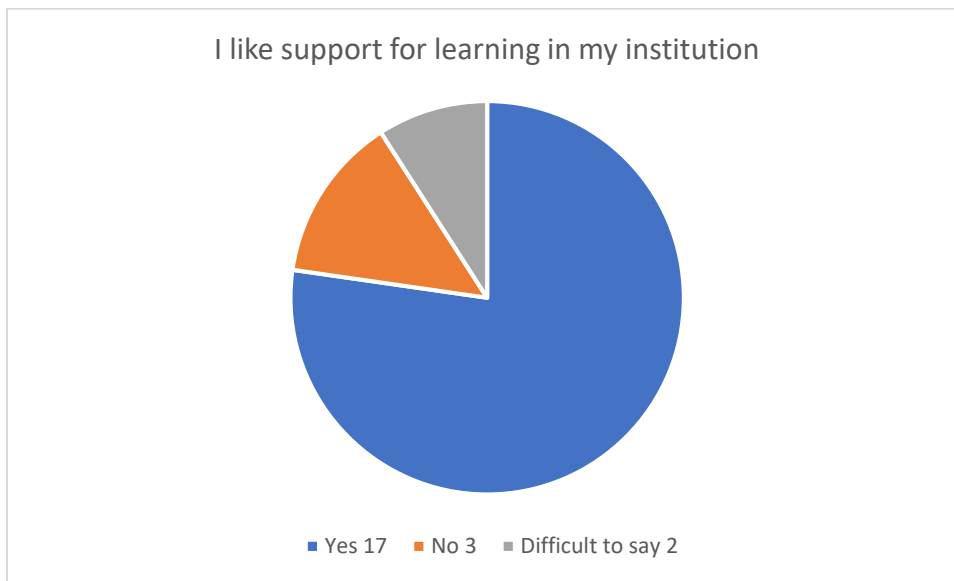
6. There is centralized support for *writing* in my institution



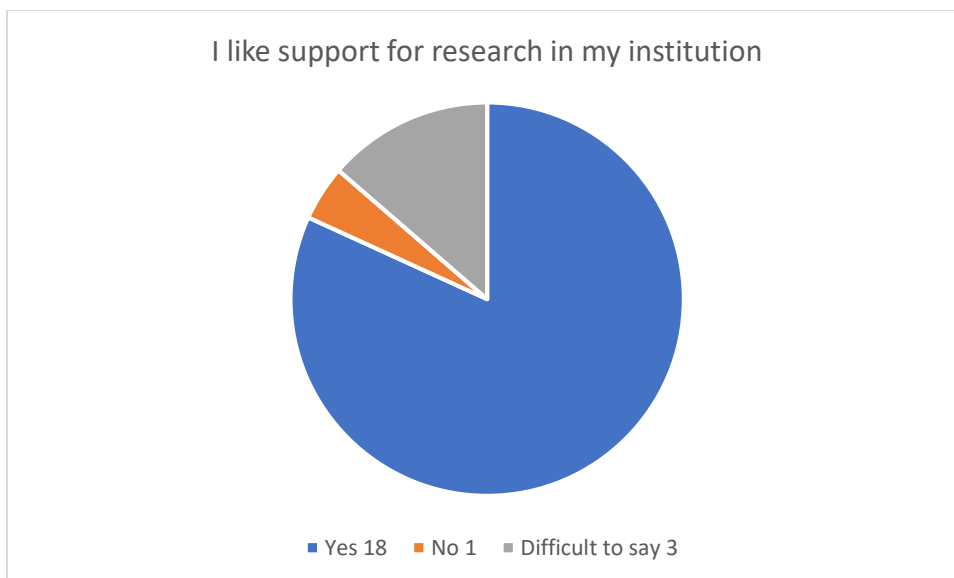
7. I like support for *teaching* in my institution



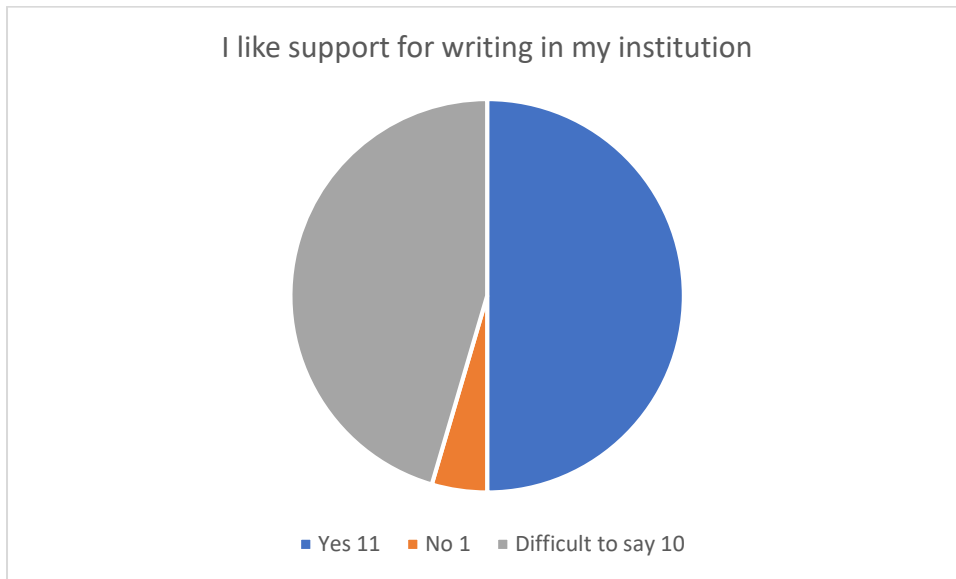
8. I like support for *learning* in my institution



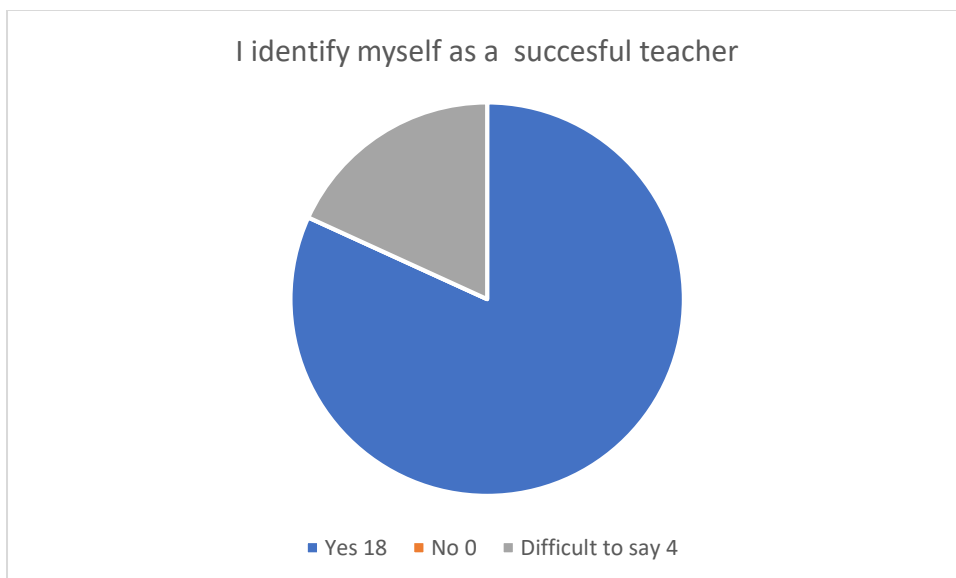
9. I like support for *research* in my institution



10. I like support for *writing* in my institution



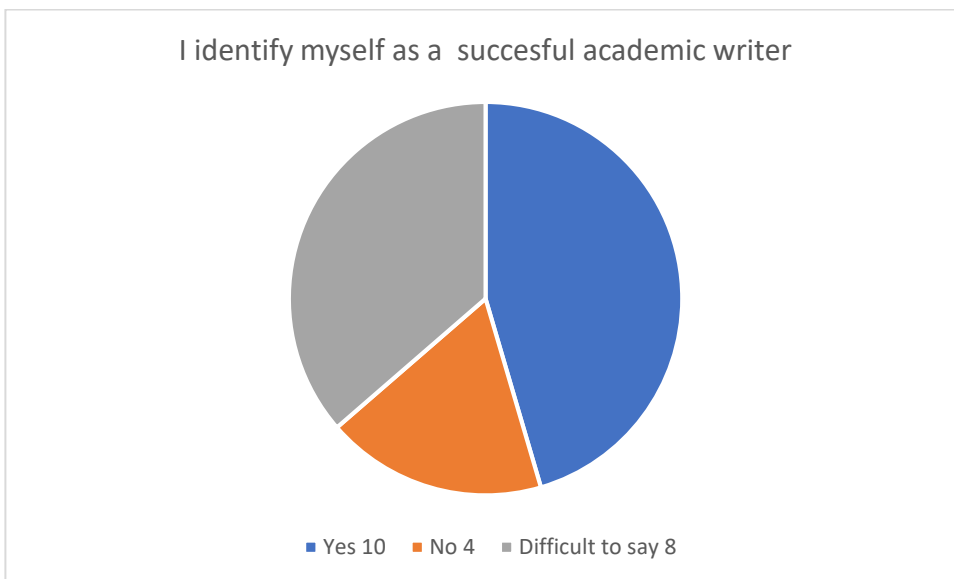
11. I identify myself as a successful teacher



12. I identify myself as a successful researcher



13. I identify myself as a successful academic writer



14. What has been the most significant and effective research support that your institution has provided for you?

- Free doctoral study
- Grants
- Academic internship at the area of interest companies
- Purchase of new equipment for research
- Participation in scientific projects and conferences of the Institute
- Research projects

- Received highly valuable advices
- My science advisor (Master's degree research work) gives me a highly valuable advices in the field at Applied Math & Statistics
- Grant for learning and research
- Difficult to say
- A room for self-studing
- To be a part of EU projects
- Opportunity to participate in science projects
- Modern-stem, certification
- The opportunity to participate in scientific conference
- Research project participation
- The most significant and effective research support was consultations with professors and providing access to research data bases and scientific papers
- I haven't used it yet
- Moral support; decreasing the teacher's load; sharing experience
- Financial support
- Moodle

15. The support that I would most like my institution to provide for me at this stage in my career is .....

- Professional qualification training (enhancement support, etc); better engagement in the activities taking place at TSI and more info on possibilities to engage
- Providing an opportunity of participation in International Scientific Conference
- Grants
- Professional training; trust in my work
- Good working conditions and great atmosphere
- Support
- Rather powerful computational capacity, such as our server or an access to AWS
- International contact; International collaborative contacts
- Courses, seminars and mentor support
- PhD's/Doctoral grants
- To consider participation in the future projects
- Research projects; conference grants
- To pay for conferences participation fees
- I would be interested in participating to the research internships
- To add opportunities for research grants
- More participations in the projects
- Grants
- Free doctoral studies; participation in paid projects and programs
- More of financial support

16. What advice would you give to an early career academic seeking to succeed across teaching, learning, research and writing?

- Work hard; don't lose your time as the competition is very high

- Be proactive
- Be creative and open-minded!
- Ask senior researchers for advices
- Develop yourself
- Keep doing everything for reaching their goals
- Work harder!
- Difficult to say
- Active participation in all processes and projects
- You just need to find something, which CAN really motivate you, encourage you!
- To participate in international research collaborations
- To gain as much connections as possible
- They should devote more time to research and publications
- To be involved into institutional researchers as much as possible
- Permanently to broaden their world outlook
- Be active
- To get more and more connections in academic world, that will def. lead to a lot of help in your activities
- Not to be afraid to apply of (for) grants
- To remember that a coin has got a two sides. Therefore it is vital to use all means of research tools available

## **Conclusion**

The purpose of the visit in the Transport and Telecommunication Institute in Riga in Latvia was to develop institutional network for the purpose of furthering friendship, scientific cooperation and exchange new ideas in the field of COST Action CA 15221 – Advancing effective institutional models towards cohesive teaching, learning, research and writing development. Especially, I was interested in investigating the existing support system for research, writing, teaching and learning in the Transport and Telecommunication Institute and prepare the case study. Transport and Telecommunication Institute (TSI) is the only private technical college university type in Latvia. The Institute offers all levels of higher education: bachelor degree, master degree, doctoral dissertation and many professional courses. There are professional centers responsible for teaching and learning on the one hand (Studies Department) and for research and academic writing on the other hand (Research Department).

The survey was completed by 22 people (male – 10 and female – 12; master – 11, PhD/doctoral level education – 8, professor – 3). According to 19 persons there is centralized support for teaching (for 3 persons it is difficult to say). For 20 respondents there is centralized support for learning. 17 respondents think that there is centralized support for research, 4 do not share this opinion (for 1 person it is difficult to say). A divergence has arisen in relation to question 6 regarding a centralized support system for writing (yes – 14; no – 3; difficult to say – 5). 16 respondents like support for teaching in the Institute; 17 like support for learning; 18 like support for research and 11 like support for writing. 18 respondents identify themselves as a successful teacher; 11 as a successful researcher and 10 as a successful academic writer.

## References

- Non-government higher education establishment (University of Applied Sciences) in Latvian Republic with permanent accreditation. TSI Accreditation Certificate Nr. 032, granted by LR Education and Science Ministry, 25.01.2002, [http://www.tsi.lv/sites/default/files/editor/Dokumenti/Registration\\_Documents/tsi-75dpi.jpg](http://www.tsi.lv/sites/default/files/editor/Dokumenti/Registration_Documents/tsi-75dpi.jpg)
- Questionare. Institutional models towards cohesive teaching, learning, research and writing development – case study. The Transport and Telecommunication Institute in Riga (Latvia).
- The Transport and Telecommunication Institute, <http://www.tsi.lv/en>