

# Learning research by doing research in the university: outcomes for the national research project on social innovation



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# Involvement of the society in social innovation for providing sustainable development of Latvia



National Research Program 5.2. “Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development – a New Approach to the Creation of a Sustainable Learning Community (EKOSOC-LV)”

# Research context

**EKOSOC-LV**  
Research project

**“Involvement of the society  
in social innovation for  
providing sustainable  
development of Latvia”**

**October, 2014 – December, 2017**



**Riga Technical University**  
study course

**“Modern research methods:  
theory and practice”**

**Autumn semester 2015**  
**45 Master students**

# Benefits for both sides

## EKOSOC-LV

### Research project

- Factors which motivate people to be involved in the solution of social problems.
- Quick data collection from Europe, Asia, Africa & America.
- Qualitative content analysis conducted by students (research reliability).
- Young eyed view of the students.



## RTU Master students

- Participation in all the stages of a real research.
- Creation of a large data base.
- Learning research by doing research in groups & individually.
- Facing real challenges in research.

# Organisation of learning research by doing research

## From practice to theory

- **Qualitative content analysis. Open coding for developing categories.**
- **Closed coding with pre-constructed codes.**
- **Analysis of scientific papers; theoretical concept and empirical part of the research.**
- **Elaboration of questionnaires “Involvement of people in the solution of social problems”.**
- **Qualitative content analysis of the respondents’ texts.**
- **Interpretation and comparison of the results.**
- **Writing the reports on the research. Presentation & analysis of the challenges faced.**
- **Theorization of the practical experience.**

# The questions of the survey

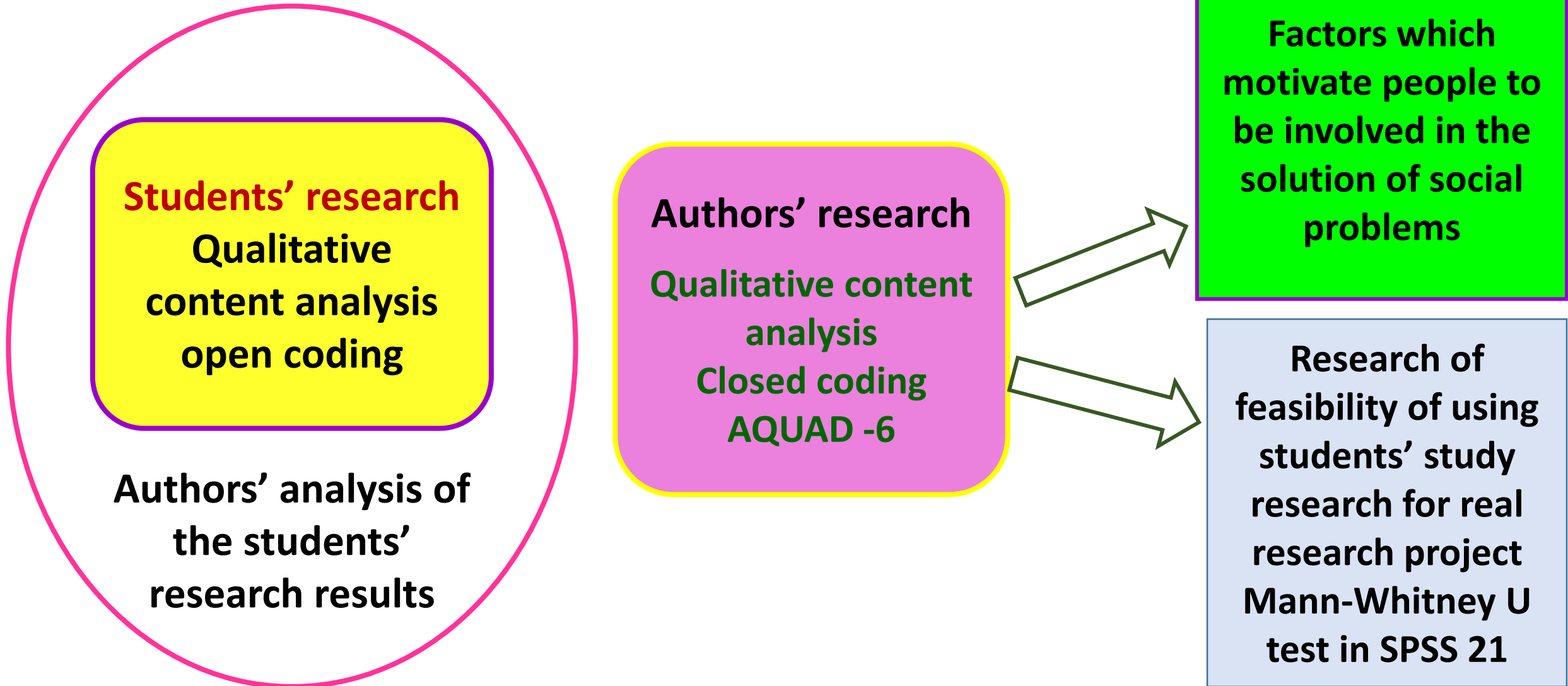
## 'Involvement of people in the solution of social problems'

Nr. of question	Questionnaire 1 For respondents with experience in solving social problems	Questionnaire 2 For respondents without experience in solving social problems
1.	What social problem have you solved and why?	What social problem (if any) have you ever wanted to solve and why?
2.	How did you solve that social problem?	How would you solve that social problem?
3.	Who helped you to solve that social problem?	Who might help you in the solution of that social problem?
4.	What challenges did you have while solving that social problem?	What challenges might you have while solving that social problem?
5.	In your opinion what is necessary to motivate people to become involved in the solution of social problems?	In your opinion what is necessary to motivate people to become involved in the solution of social problems?

# Research questions

1. What motivates people to be involved in the solution of social problems?
2. Is it feasible to use students' learning research for real research projects at the national level?

# Research design and methods





# The findings: analysis of the results of the students research (1)

Nr.	Key ideas on which the students' qualitative content analysis was based	Categories finalised by the authors
1.	Awareness of social problems; social awareness; understanding of social problems; awareness of the importance and impact of the solution of social problems	<b>Awareness</b>
2.	Support from: mass media, government, enterprises, NGOs, families, friends and other individuals	<b>Support</b>
3.	First-hand experience; facing the problem directly; personal involvement in the problem via challenges faced by oneself, family, relatives, friends and colleagues	<b>Personal affection</b>
4.	Social responsibility; social conscience; moral values; ethical norms; social thinking; commitment; acting for the benefit of society	<b>Social responsibility</b>
5.	Cooperation; collaboration; teamwork; networking; volunteering; co-thinking; co-deciding; co-creating	<b>Co-creation</b>
6.	Empathy; human compassion; love; sympathy; mercy	<b>Empathy</b>
7.	Recognition of results; acknowledgement; gratitude; appreciation; respect and honour	<b>Appreciation</b>

# The findings: analysis of the results of the students research (2)

Nr.	Key ideas on which the students' qualitative content analysis was based	Categories finalised by the authors
8.	Financial motivation; bonuses; rewards; benefit; employment opportunity; better quality of life	<b>Personal gain</b>
9.	Communication, active dialogue: with local community, government, enterprises, NGOs, mass media and private sector for sharing experience	<b>Active dialogue</b>
10.	Example of active participation; inspiring examples; role models; success stories; inspiring people	<b>Inspiring examples</b>
11.	Personal experience; own experience in solving social problems	<b>Personal experience</b>
12.	Opportunities and chance for participation in social life and solution of social problems	<b>Participation opportunities</b>
13.	Future orientation; understanding the ultimate goal; understanding the consequences of one's actions; acting towards future outcomes	<b>Proactivity</b>
14.	Education; educational campaigns and programmes; learning from experience; career guidance; seminars and public events	<b>Education</b>

# The findings of the authors' own qualitative content analysis

## Intrapersonal factors

### Self-awareness

Empathy  
Personal gain  
Personal affection  
Own experience  
Proactivity

## Interpersonal factors

Social awareness  
Co-creation  
Active dialogue  
Education  
Social responsibility

## External factors

Support  
Appreciation  
Inspiring examples  
Participation opportunities

# Self-awareness

## Coding by the students

‘People will be motivated to solve social problems when they are helped to understand that they are an entire part of the society and they are able to and should bring great innovations in the world by doing simple things.’

*(proactivity, social responsibility)*

‘To make them see how even a fraction of work by them can contribute towards overall achievement.’ *(proactivity)*

‘- Awareness of people that everybody can contribute a little bit to find a solution *(social awareness)*.

- Find successful examples *(inspiring examples)* and communicate with them regularly *(active dialogue)* to show them that they could be in the same situation and might need help’. *(personal affection)*

## Coding by the authors

‘People will be motivated to solve social problems when they are helped to understand that they are an entire part of the society and they are able to and should bring great innovations in the world by doing simple things.’

*(proactivity, social responsibility, self-awareness)*

‘To make them see how even a fraction of work by them can contribute towards overall achievement.’ *(proactivity, self-awareness)*

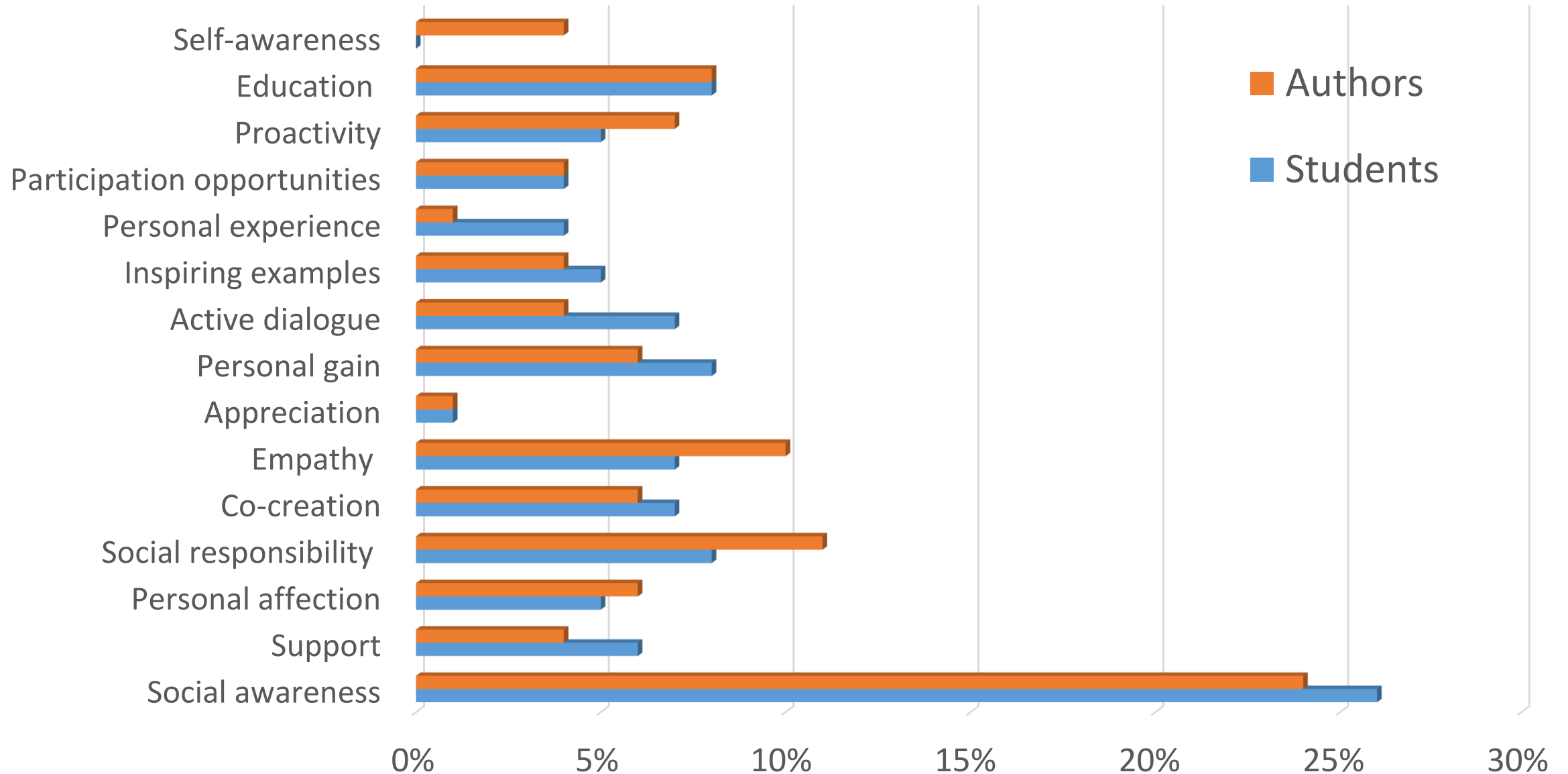
‘- Awareness of people that everybody can contribute a little bit to find a solution *(social awareness, self-awareness)*.

- Find successful examples *(inspiring examples)* and communicate with them regularly *(active dialogue)* to show them that they could be in the same situation and might need help’. *(personal affection)*

# Frequencies of categories (fragment)

Group of respondents	Researcher code	Country of student	Social awareness	Support	Personal affection	Social responsibility	Co-creation	Empathy	Appreciation	Personal gain	Active dialogue	Inspiring examples	Personal experience	Participation opportunity	Proactivity	Education	Self-awareness
			Frequencies of categories														
With experience in solving social problems	S1	Ukraine	33	8	9	8	10	17	6	13	12	3	0	0	0	0	0
	S2	Ukraine	35	12	11	9	12	12	2	12	7	6	6	3	6	0	0
	S3	Thailand	49	8	2	11	1	0	0	7	4	42	10	10	0	34	0
	S4	Panama	44	6	6	1	6	19	0	13	10	0	3	6	0	5	0
	S5	Russia	10	14	4	27	21	9	0	6	21	4	7	4	6	14	0
	S6	Germany	19	4	14	7	15	15	0	14	8	5	13	8	5	11	0
	AU <sub>1,2,3</sub>		63	10	17	31	18	24	5	15	18	12	6	8	17	16	17
	AU <sub>4,5</sub>		52	13	21	19	17	29	6	14	7	8	2	9	5	14	14
	AU <sub>1,2,3,4,5</sub>		63	13	21	31	18	29	6	16	18	12	6	9	17	16	17

# Distribution of the weights of the factors which motivate people to be involved in the solution of social problems



# Feasibility of using students' study research for real research projects

Researcher code	Country of student	Social awareness	Support	Personal affection	Social responsibility	Co-creation	Empathy	Appreciation	Personal gain	Active dialogue	Inspiring examples	Personal experience	Participation opportunity	Proactivity	Education	Self-awareness
		Total frequencies of categories summed up from the analysis of both questionnaires														
S1	Ukraine	113	21	20	35	20	32	22	26	25	8	0	0	0	0	0
S2	Ukraine	111	26	28	36	26	24	4	21	12	14	13	6	29	0	0
S3	Thailand	77	13	2	12	5	0	0	14	6	56	12	14	0	43	0
S4	Panama	134	15	10	9	7	33	0	32	11	5	3	28	0	34	0
S5	Russia	46	24	11	60	54	24	0	18	54	14	14	12	42	44	0
S6	Germany	44	16	32	19	33	31	0	45	27	14	32	11	21	36	0
AU <sub>1,2,3</sub>		63	173	29	41	85	41	62	10	40	31	25	10	27	56	54
AU <sub>4,5</sub>		52	136	25	40	58	31	63	9	36	18	21	3	25	36	49
AU <sub>1,2,3,4,5</sub>		63	173	32	45	85	41	67	11	41	31	25	10	28	56	54

# Feasibility of using students' study research for real research projects: Mann-Whitney U test in IBM SPSS Statistics 20

Two independent samples: students (N=6) & authors' groups (N = 3)

## Statistically significant differences

Social awareness (p = .024)  
Support (p = .048)  
Personal affection (p = .024)  
Social responsibility (p = .048)  
Empathy (p = .024)  
Proactivity (p = .036)  
Education (p = .024)  
Self-awareness (p = .012)

## No statistically significant differences (p > .05)

Personal gain  
Own experience  
Co-creation  
Active dialogue  
Appreciation  
Inspiring examples  
Participation opportunities



# Interpretation of the results

The authors worked in groups (N=3) vs students' individual work (N=6).

The authors identified certain codes more frequently:

Coding by the students	Coding by the authors
'The important thing to motivate people to become involved is to make them understand that everyone should have the right and also should live together peacefully and solve social problems together ( <i>co-creation</i> ) as it could influence everyone's life ( <i>social awareness</i> ).	'The important thing to motivate people to become involved is to make them understand that everyone should have the right and also should live together peacefully ( <i>social responsibility</i> ) and solve social problems together ( <i>co-creation</i> ), as it could influence everyone's life ( <i>social awareness, personal affection, proactivity</i> ).

The authors' qualitative content analysis ended with more frequencies for some categories.

# Conclusions

- The research conducted by the authors revealed fifteen factors which motivate people to be involved in the solution of social problems. Fourteen factors were determined based on the results of the students' study research. Only one factor was complementary added by the authors.
- It is feasible to use the potential of university students' study research for real research projects provided that they would work in small groups of two or three students and collaborate with the teacher. This practice would require elaboration of a new approach to the assessment of students' final work, keeping to the main logic of the organisation of learning research by doing research realised in RTU.



Thank  
you for  
attention!