

# ReFEEHS Survey

## Teaching competencies development



Co-funded by the  
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## Background

The importance of teaching competencies development of academic staff and teacher practitioners involved in health professions education is well recognized. It is a foundation for the development of the culture of effective teaching and learning, and driving force for transformation of health professions education in line with the emerging demands in healthcare and rapidly changing professional roles. Competencies purposed within frameworks of teaching competencies for healthcare professions education have been interpreted as “integration of knowledge, skills and attitude and described as behaviour in specific context”, while several following have been suggested as crucial: (1) medical (or content) knowledge, (2) learner-centeredness, (3) interpersonal and communication skills, (4) professionalism and role modeling, (5) practice-based reflection, and (6) systems-based practice (1-3). In order to fulfill purposed competencies, professional development of healthcare professions educators is crucial, while their main professional development needs is necessary to explore continually.

As support to professional development of healthcare professions educators, a number of specific guidelines related to teaching, learning and assessment for medical teachers have been developed, dominantly by the International Association for Medical Education (AMEE), and different study programs – short thematic courses, postgraduate certificate, diploma, and master programs have been established, mostly in the United Kingdom. However, such programs specifically tailored for teaching staff involved in healthcare professions education are still missing in most EU countries.

Healthcare professions education in Serbia is struggling to keep up with global developments. Teaching competencies development of academic staff and teacher practitioners involved in healthcare professions education, including introduction of Teaching Certificate in Health Professions Education study programme, was one of the principal goals of the Erasmus+ project “Reinforcement of the Framework for Experiential Education in Healthcare in Serbia” (ReFEEHS) co-funded by the Education, Audiovisual and Culture Executive Agency of the European Union within the Erasmus+ Capacity Building in Higher Education Program (<http://refeehs.com/>).



## TCD survey aims and methodology

The survey has been conducted with the following aims:

- ✓ To explore current teaching competencies requirements for promotion as academic staff at institutions, participants of the ReFEEHS consortium
- ✓ To explore academic staff practices and experiences, needs, attitudes and beliefs related to pedagogical activities and teaching competencies development

The survey have been conducted among Erasmus+ ReFEEHS consortium Erasmus+ ReFEEHS consortium which consists of eight universities, four from the Republic of Serbia, a four EU universities, as follows:

- University of Belgrade (project coordinator), Serbia
- University of Kragujevac, Serbia
- University of Niš, Serbia
- University of Novi Sad), Serbia
- University of Dublin (Trinity College Dublin), Ireland
- Medical University Sofia, Bulgaria
- University of Lisbon – Faculty of Pharmacy, Portugal
- University of Pecs, Hungary

Contact persons have been asked to complete the questionnaire related to teaching competencies requirements/criteria for promotion at their institutions, in line with the first aim of the survey. Online, anonymous questionnaire has been developed in line with the second aim of the survey and. This questionnaire has been distributed among academic staff employed at the schools of Medicine, Dental Medicine, Nursing and Pharmacy at the eight higher education institutions, members of the ReFEEHS consortium.



## Teaching competencies development: current requirements within ReFEEHS consortium

Evaluation of teaching competencies and pedagogical activities is one of mandatory requirement for teacher appointment at all universities participants of Erasmus+ ReFEEHS consortium, excepted Medical University Sofia. By reviewing actual criteria for promotion as academic staff, several pedagogical criteria have been revised among ReFEEHS consortium participants.

In line with Regulation on Minimal Criteria for Promotion at Universities in Republic of Serbia and the National Council for Higher Education recommendations, the following teaching competencies criteria have been purposed as obligatory:

- ✓ positive grade of introductory lecture (obligated criteria for the first appointment as university teacher)
- ✓ positive assessment of pedagogical work within students' surveys.
- ✓ (promotion as associate or full professor) preparing of learning literature (book, workbook, tutorial, monograph)
- ✓ (promotion as full professor) experience in work with students
- ✓ (promotion as full professor) participation in at least three undergraduate (master) or postgraduate students' thesis committee
- ✓ (promotion as full professor) mentor of PhD thesis

Universities in Republic of Serbia, participants of the ReFEEHS consortium, have introduced purposed criteria. Moreover, some institutions have recommended several additional alternative criteria: creating of teaching materials (demonstrating case studies, etc.), preparation and/or handling of the curriculum or study programme; leading of department; active participation/organization of clinical meetings or journal clubs; managing the work of associates in teaching (assistants, interns, specialists); mentoring of students' research work; tutorial work with students (Appendix 1).

Positive assessment of pedagogical work within students' surveys has also been introduced as criteria for academic promotion at University of Dublin (Trinity College



Dublin), and University of Lisbon – Faculty of Pharmacy. However, it was not the case with positive grade of introductory lecture. On the contrary to criteria in Republic of Serbia, focus of teaching competencies criteria for promotion at EU institutions is directed to (Appendix 1):

- ✓ innovations in existing programmes (“Introduced innovations of significance in existing programmes”, “Innovation in pedagogy, namely e-learning course or activities”)
- ✓ improvement of teaching quality (“Commitment to enhancing the teaching quality”, “Dedication and quality of the professional activities related to teaching”)



## Academic staff practices, experiences, needs, attitudes and beliefs related to teaching competencies development

In total, 104 academic staff members (75 from RS and 29 from EU) participated in the study. Socio-demographic data and work experience of survey participants are presented in Table 1.

Table 1. Socio-demographic data and work experience of the study population, N=104

	%
<b>Gender</b>	
Male	31.7
Female	68.3
<b>Academic position</b>	
Full professor	26.0
Associate professor	19.2
Assistant professor	54.8
	<b><math>\bar{x} \pm SD</math></b>
<b>Age</b>	47.66 $\pm$ 8.29
<b>Years of work experience</b>	22.63 $\pm$ 8.57
<b>Years of teaching experience</b>	14.79 $\pm$ 9.63
<b>Teaching hours per week</b>	6.87 $\pm$ 2.99
<b>Preparation hours per week</b>	6.19 $\pm$ 2.92
<b>Administration hours per week</b>	4.96 $\pm$ 3.04

Abbreviation: SD- Standard Deviation



## Academic staff practices and experiences related to teaching competencies development

Participation in different educational activities related to pedagogical improvement has been studied (Table 2). Formal qualification (degree, diploma, certificate), supervised/peer-assessed teaching process, and participation in research project concerning pedagogy were revealed as educational activities where the highest proportion of participants did not take part, 71, 63.5, and 53.8%, respectively. On the contrary, the highest number has participated in courses/workshops with education related topics, 66.3%. Majority of participants have been engaged in informal activities like dialogue with colleagues on how to improve teaching (95.6%), while more than two third, 68.4%, reads professional literature about pedagogy (Table 2).

There were no significant differences between RS and EU academic staff in participation in different educational activities related to pedagogical improvement, with exception of conferences/symposia which were significantly more visited by EU academic staff in comparison to RS colleagues (72.4% vs. 48.0%, respectively) (Appendix 2).

Activities estimated by RS academic staff members as those with the largest impact on participants' development as a teacher were informal dialogue with colleagues on how to improve teaching (28.0%), reading of professional literature about pedagogy (28.0%), and study visit to other higher education institution (24.0%), while EU participants highlighted courses/workshops with education-related topics (34.5%), participation in research project concerning pedagogy (27.6%), informal dialogue with colleagues on how to improve teaching (24.1%), and conferences/symposia concerning education (22.6%) (Appendix 2).

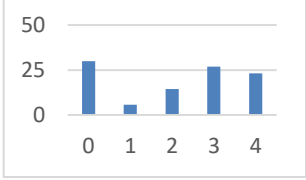
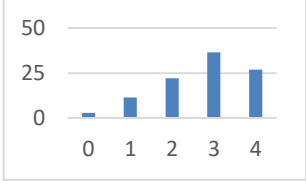




Table 2. Participation in activities related to pedagogical knowledge and skills improvement, and the impact of these activities at development as a teacher (Likert scale: 0-Did not attend; 1-Yes, with no impact; 2-Yes, with small impact; 3-Yes, with moderate impact; 4-Yes, with large impact)

Statement	Likert scale, %	Mean												
<b>Formal activities</b>														
<i>Courses/Workshops with education related topics</i>	<table border="1"> <caption>Data for Courses/Workshops with education related topics</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>35</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>25</td></tr> <tr><td>4</td><td>20</td></tr> </table>	Likert Scale	Percentage (%)	0	35	1	5	2	10	3	25	4	20	1.97
Likert Scale	Percentage (%)													
0	35													
1	5													
2	10													
3	25													
4	20													
<i>Conferences/symposia concerning education</i>	<table border="1"> <caption>Data for Conferences/symposia concerning education</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>45</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>20</td></tr> <tr><td>4</td><td>10</td></tr> </table>	Likert Scale	Percentage (%)	0	45	1	5	2	10	3	20	4	10	1.52
Likert Scale	Percentage (%)													
0	45													
1	5													
2	10													
3	20													
4	10													
<i>Formal qualification (degree, diploma, certificate)</i>	<table border="1"> <caption>Data for Formal qualification (degree, diploma, certificate)</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>70</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>5</td></tr> <tr><td>3</td><td>5</td></tr> <tr><td>4</td><td>5</td></tr> </table>	Likert Scale	Percentage (%)	0	70	1	5	2	5	3	5	4	5	0.72
Likert Scale	Percentage (%)													
0	70													
1	5													
2	5													
3	5													
4	5													
<i>Study visit to other higher education institution</i>	<table border="1"> <caption>Data for Study visit to other higher education institution</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>50</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>5</td></tr> <tr><td>3</td><td>15</td></tr> <tr><td>4</td><td>20</td></tr> </table>	Likert Scale	Percentage (%)	0	50	1	5	2	5	3	15	4	20	1.59
Likert Scale	Percentage (%)													
0	50													
1	5													
2	5													
3	15													
4	20													
<i>Participation in research project concerning pedagogy</i>	<table border="1"> <caption>Data for Participation in research project concerning pedagogy</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>50</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>10</td></tr> <tr><td>4</td><td>15</td></tr> </table>	Likert Scale	Percentage (%)	0	50	1	2	2	10	3	10	4	15	1.42
Likert Scale	Percentage (%)													
0	50													
1	2													
2	10													
3	10													
4	15													
<i>Supervised/Peer-assessed teaching process</i>	<table border="1"> <caption>Data for Supervised/Peer-assessed teaching process</caption> <tr><th>Likert Scale</th><th>Percentage (%)</th></tr> <tr><td>0</td><td>60</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>3</td><td>5</td></tr> <tr><td>4</td><td>5</td></tr> </table>	Likert Scale	Percentage (%)	0	60	1	5	2	2	3	5	4	5	0.93
Likert Scale	Percentage (%)													
0	60													
1	5													
2	2													
3	5													
4	5													
<b>Informal activities</b>														



<p><i>Reading of professional literature about pedagogy</i></p>		<p>2.08</p>
<p><i>Engaging in informal dialogue with colleagues on how to improve teaching</i></p>		<p>2.73</p>

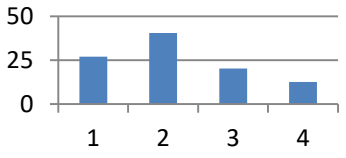
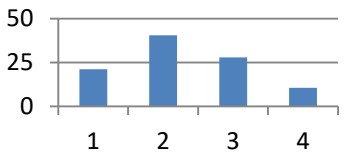
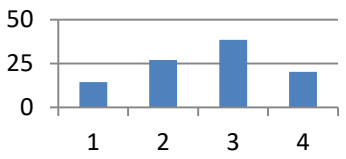
### Academic staff needs related to teaching competencies development

Several educational need have been evaluated within the survey, and the results are presented in Table 3. For majority of surveyed needc, moderate and high level of need has been reviled, excepted student discipline and behavior problems, and administration, documentation and student management. However, significant differences between RS and EU participants were evident. In direct between groups comparison, RS academic staff has shown significantly more need for education related to drawing up the content and delivering of theoretical and practical classes, and student assessment, while EU academic staff has shown significantly more need for design, planning and implementation of a lesson or course, and lower need for large group (classroom) management (Appendix 3). The following needs have been estimated as those with “high level of need” by the peak proportion of RS participants: teaching students with special learning needs (36.1%), student assessment (31.3%), instructional design - design, planning and implementation of a lesson/course (28.9%), and large group (classroom) management (26.5%), while EU participants highlighted only teaching students with special learning needs (35.5%) (Appendix 3).



Table 3. Teachers' professional development needs (Likert scale: 1- No need at all; 2- Low level of need; 3- Moderate level of need; 4- High level of need)

Professional development need	Likert scale, %	Mean										
<i>Drawing up the content and delivering theory classes</i>	<table border="1"> <caption>Data for 'Drawing up the content and delivering theory classes'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>28</td> </tr> <tr> <td>3</td> <td>42</td> </tr> <tr> <td>4</td> <td>15</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	10	2	28	3	42	4	15	2.68
Likert Scale	Percentage (%)											
1	10											
2	28											
3	42											
4	15											
<i>Drawing up the content and delivering practical classes</i>	<table border="1"> <caption>Data for 'Drawing up the content and delivering practical classes'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>15</td> </tr> <tr> <td>2</td> <td>25</td> </tr> <tr> <td>3</td> <td>38</td> </tr> <tr> <td>4</td> <td>18</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	15	2	25	3	38	4	18	2.59
Likert Scale	Percentage (%)											
1	15											
2	25											
3	38											
4	18											
<i>Student assessment</i>	<table border="1"> <caption>Data for 'Student assessment'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8</td> </tr> <tr> <td>2</td> <td>25</td> </tr> <tr> <td>3</td> <td>35</td> </tr> <tr> <td>4</td> <td>25</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	8	2	25	3	35	4	25	2.82
Likert Scale	Percentage (%)											
1	8											
2	25											
3	35											
4	25											
<i>Large group (classroom) management</i>	<table border="1"> <caption>Data for 'Large group (classroom) management'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>25</td> </tr> <tr> <td>3</td> <td>32</td> </tr> <tr> <td>4</td> <td>20</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	10	2	25	3	32	4	20	2.70
Likert Scale	Percentage (%)											
1	10											
2	25											
3	32											
4	20											
<i>Instructional design - design, planning and implementation of a lesson/course</i>	<table border="1"> <caption>Data for 'Instructional design - design, planning and implementation of a lesson/course'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>25</td> </tr> <tr> <td>3</td> <td>38</td> </tr> <tr> <td>4</td> <td>18</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	10	2	25	3	38	4	18	2.75
Likert Scale	Percentage (%)											
1	10											
2	25											
3	38											
4	18											
<i>ICT skills in teaching</i>	<table border="1"> <caption>Data for 'ICT skills in teaching'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>20</td> </tr> <tr> <td>3</td> <td>45</td> </tr> <tr> <td>4</td> <td>15</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	10	2	20	3	45	4	15	2.74
Likert Scale	Percentage (%)											
1	10											
2	20											
3	45											
4	15											
<i>Teaching students with special learning needs</i>	<table border="1"> <caption>Data for 'Teaching students with special learning needs'</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12</td> </tr> <tr> <td>2</td> <td>18</td> </tr> <tr> <td>3</td> <td>25</td> </tr> <tr> <td>4</td> <td>35</td> </tr> </tbody> </table>	Likert Scale	Percentage (%)	1	12	2	18	3	25	4	35	2.88
Likert Scale	Percentage (%)											
1	12											
2	18											
3	25											
4	35											

<i>Student discipline and behavior problems</i>		2.18
<i>Administration, documentation and student management</i>		2.28
<i>Student counselling/guidance</i>		2.64

### Academic staff attitudes and beliefs related to teaching competencies development

By exploring academic staff attitudes and beliefs, all surveyed statements which have stated behaviours related to teaching and learning in a positive manner, were estimated with a very high level of agreement by participants, with the mean score of the Likert scale above 4 (Table 4). However, statements scored with the mean score of the Likert scale below 4 were those which stated negative aspects of teaching and learning, like “lessons or topics covered in course are not appropriate for students 'level of knowledge" or “are completely unrelated” and “Lessons and materials used during the course are not well linked with the previous students' knowledge or skills”.

Such responses may indicate non-critical self-evaluation. However, the limitation of the study could be the study sample which is composed of low number, but of very motivated academic staff with high intrinsic motivation for teaching and learning improvements. Accordingly, results of the survey have to be interpreted with stated limitations in mind.



Table 4. Attitudes and beliefs on teaching and learning (Likert scale: 1- Strongly disagree; 2- Disagree; 3- Neither agree nor disagree; 4- Agree; 5- Strongly agree)

Statement	Likert scale, %	Mean												
<i>My main role as a teacher is to transmit knowledge to the students</i>	<table border="1"> <caption>Data for Statement 1</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>10</td></tr> <tr><td>4</td><td>40</td></tr> <tr><td>5</td><td>40</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	2	2	10	3	10	4	40	5	40	4.08
Likert Scale	Percentage (%)													
1	2													
2	10													
3	10													
4	40													
5	40													
<i>My main role as a teacher is to facilitate students' learning</i>	<table border="1"> <caption>Data for Statement 2</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>3</td><td>2</td></tr> <tr><td>4</td><td>40</td></tr> <tr><td>5</td><td>54</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	2	2	2	3	2	4	40	5	54	4.52
Likert Scale	Percentage (%)													
1	2													
2	2													
3	2													
4	40													
5	54													
<i>I think that some lessons or topics covered in course are not appropriate for students "level of knowledge"</i>	<table border="1"> <caption>Data for Statement 3</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>8</td></tr> <tr><td>2</td><td>22</td></tr> <tr><td>3</td><td>18</td></tr> <tr><td>4</td><td>35</td></tr> <tr><td>5</td><td>17</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	8	2	22	3	18	4	35	5	17	3.33
Likert Scale	Percentage (%)													
1	8													
2	22													
3	18													
4	35													
5	17													
<i>I think that different topics or lessons covered in course/curricula are completely unrelated</i>	<table border="1"> <caption>Data for Statement 4</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>8</td></tr> <tr><td>2</td><td>20</td></tr> <tr><td>3</td><td>22</td></tr> <tr><td>4</td><td>30</td></tr> <tr><td>5</td><td>18</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	8	2	20	3	22	4	30	5	18	3.33
Likert Scale	Percentage (%)													
1	8													
2	20													
3	22													
4	30													
5	18													
<i>Lessons and materials used during the course are not well linked with the previous students' knowledge or skills</i>	<table border="1"> <caption>Data for Statement 5</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>35</td></tr> <tr><td>3</td><td>25</td></tr> <tr><td>4</td><td>25</td></tr> <tr><td>5</td><td>5</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	10	2	35	3	25	4	25	5	5	2.86
Likert Scale	Percentage (%)													
1	10													
2	35													
3	25													
4	25													
5	5													
<i>I clearly state outcomes and objectives of the lesson or course</i>	<table border="1"> <caption>Data for Statement 6</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>3</td><td>10</td></tr> <tr><td>4</td><td>40</td></tr> <tr><td>5</td><td>46</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	2	2	2	3	10	4	40	5	46	4.37
Likert Scale	Percentage (%)													
1	2													
2	2													
3	10													
4	40													
5	46													
<i>I clearly inform students of the competencies they will be expected to acquire</i>	<table border="1"> <caption>Data for Statement 7</caption> <thead> <tr> <th>Likert Scale</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>10</td></tr> <tr><td>4</td><td>45</td></tr> <tr><td>5</td><td>33</td></tr> </tbody> </table>	Likert Scale	Percentage (%)	1	2	2	10	3	10	4	45	5	33	4.20
Likert Scale	Percentage (%)													
1	2													
2	10													
3	10													
4	45													
5	33													

<p><i>I present the lesson content following a clear and logical framework</i></p>	<table border="1"> <caption>Data for 'I present the lesson content following a clear and logical framework'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>0</td> </tr> <tr> <td>4</td> <td>50</td> </tr> <tr> <td>5</td> <td>45</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	0	4	50	5	45	<p>4.38</p>
Rating	Count													
1	0													
2	0													
3	0													
4	50													
5	45													
<p><i>The content of the lesson is tailored to the students' knowledge and needs</i></p>	<table border="1"> <caption>Data for 'The content of the lesson is tailored to the students' knowledge and needs'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>2</td> </tr> <tr> <td>3</td> <td>12</td> </tr> <tr> <td>4</td> <td>45</td> </tr> <tr> <td>5</td> <td>38</td> </tr> </tbody> </table>	Rating	Count	1	0	2	2	3	12	4	45	5	38	<p>4.19</p>
Rating	Count													
1	0													
2	2													
3	12													
4	45													
5	38													
<p><i>I respond clearly to the students' questions and comments</i></p>	<table border="1"> <caption>Data for 'I respond clearly to the students' questions and comments'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>0</td> </tr> <tr> <td>4</td> <td>35</td> </tr> <tr> <td>5</td> <td>55</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	0	4	35	5	55	<p>4.55</p>
Rating	Count													
1	0													
2	0													
3	0													
4	35													
5	55													
<p><i>I'm available for students' questions and comments (consultation, e-mail)</i></p>	<table border="1"> <caption>Data for 'I'm available for students' questions and comments (consultation, e-mail)'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>0</td> </tr> <tr> <td>4</td> <td>30</td> </tr> <tr> <td>5</td> <td>55</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	0	4	30	5	55	<p>4.62</p>
Rating	Count													
1	0													
2	0													
3	0													
4	30													
5	55													
<p><i>I provide useful information for the future professional development of student</i></p>	<table border="1"> <caption>Data for 'I provide useful information for the future professional development of student'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>4</td> <td>35</td> </tr> <tr> <td>5</td> <td>50</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	8	4	35	5	50	<p>4.40</p>
Rating	Count													
1	0													
2	0													
3	8													
4	35													
5	50													
<p><i>I encourage student interest in learning and fulfilment of the teaching requirements</i></p>	<table border="1"> <caption>Data for 'I encourage student interest in learning and fulfilment of the teaching requirements'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>4</td> <td>38</td> </tr> <tr> <td>5</td> <td>48</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	8	4	38	5	48	<p>4.34</p>
Rating	Count													
1	0													
2	0													
3	8													
4	38													
5	48													
<p><i>I foster critical thinking and spirit in students</i></p>	<table border="1"> <caption>Data for 'I foster critical thinking and spirit in students'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td>4</td> <td>38</td> </tr> <tr> <td>5</td> <td>50</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	5	4	38	5	50	<p>4.45</p>
Rating	Count													
1	0													
2	0													
3	5													
4	38													
5	50													
<p><i>I support discussion among students</i></p>	<table border="1"> <caption>Data for 'I support discussion among students'</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td>4</td> <td>38</td> </tr> <tr> <td>5</td> <td>50</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	5	4	38	5	50	<p>4.45</p>
Rating	Count													
1	0													
2	0													
3	5													
4	38													
5	50													



<i>I support student individual work</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>45</td> </tr> <tr> <td>5</td> <td>40</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	0	3	10	4	45	5	40	4.28
Rating	Number of Responses													
1	0													
2	0													
3	10													
4	45													
5	40													
<i>I encourage teamwork among students</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>40</td> </tr> <tr> <td>5</td> <td>45</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	5	3	10	4	40	5	45	4.33
Rating	Number of Responses													
1	0													
2	5													
3	10													
4	40													
5	45													
<i>I foster student interest in research</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>40</td> </tr> <tr> <td>5</td> <td>50</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	5	3	10	4	40	5	50	4.31
Rating	Number of Responses													
1	0													
2	5													
3	10													
4	40													
5	50													
<i>I interweave the content of the subject matter with other courses</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>40</td> </tr> <tr> <td>5</td> <td>50</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	5	3	10	4	40	5	50	4.41
Rating	Number of Responses													
1	0													
2	5													
3	10													
4	40													
5	50													
<i>I use teaching methods and materials that foster student learning (e.g. video materials, clinical problems, simulators)</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>10</td> </tr> <tr> <td>3</td> <td>15</td> </tr> <tr> <td>4</td> <td>45</td> </tr> <tr> <td>5</td> <td>40</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	10	3	15	4	45	5	40	4.15
Rating	Number of Responses													
1	0													
2	10													
3	15													
4	45													
5	40													
<i>I have realistic expectations regarding the students' knowledge and skills acquired within the course</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>50</td> </tr> <tr> <td>5</td> <td>40</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	5	3	10	4	50	5	40	4.22
Rating	Number of Responses													
1	0													
2	5													
3	10													
4	50													
5	40													
<i>The assessment clearly incorporates the stated objectives and outcomes of the course</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>50</td> </tr> <tr> <td>5</td> <td>40</td> </tr> </tbody> </table>	Rating	Number of Responses	1	0	2	5	3	10	4	50	5	40	4.24
Rating	Number of Responses													
1	0													
2	5													
3	10													
4	50													
5	40													
<i>In order to pass the course, student mainly need to memorize materials</i>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Number of Responses</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>15</td> </tr> <tr> <td>3</td> <td>25</td> </tr> <tr> <td>4</td> <td>35</td> </tr> <tr> <td>5</td> <td>15</td> </tr> </tbody> </table>	Rating	Number of Responses	1	10	2	15	3	25	4	35	5	15	3.23
Rating	Number of Responses													
1	10													
2	15													
3	25													
4	35													
5	15													

<p><i>I think I provide feedback during the assessment</i></p>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>50</td> </tr> <tr> <td>5</td> <td>35</td> </tr> </tbody> </table>	Rating	Count	1	0	2	5	3	10	4	50	5	35	<p>4.11</p>
Rating	Count													
1	0													
2	5													
3	10													
4	50													
5	35													
<p><i>I objectively assess student's knowledge</i></p>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>55</td> </tr> <tr> <td>5</td> <td>40</td> </tr> </tbody> </table>	Rating	Count	1	0	2	5	3	10	4	55	5	40	<p>4.27</p>
Rating	Count													
1	0													
2	5													
3	10													
4	55													
5	40													
<p><i>I maintain professional position during the classes and in communication with students</i></p>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>40</td> </tr> <tr> <td>5</td> <td>55</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	10	4	40	5	55	<p>4.41</p>
Rating	Count													
1	0													
2	0													
3	10													
4	40													
5	55													
<p><i>I obey ethical principles during the classes and in communication with students</i></p>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td>4</td> <td>35</td> </tr> <tr> <td>5</td> <td>55</td> </tr> </tbody> </table>	Rating	Count	1	0	2	0	3	5	4	35	5	55	<p>4.53</p>
Rating	Count													
1	0													
2	0													
3	5													
4	35													
5	55													
<p><i>I efficiently incorporate and employ ICT (information and communication technologies)</i></p>	<table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>3</td> <td>10</td> </tr> <tr> <td>4</td> <td>50</td> </tr> <tr> <td>5</td> <td>35</td> </tr> </tbody> </table>	Rating	Count	1	0	2	5	3	10	4	50	5	35	<p>4.17</p>
Rating	Count													
1	0													
2	5													
3	10													
4	50													
5	35													
<p><i>I think that problem- based learning (to certain extent self-directed learning) is the easiest way for student to acquire knowledge</i></p>	<table border="1"> <thead> <tr> <th>Category</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Str...</td> <td>0</td> </tr> <tr> <td>Dis...</td> <td>5</td> </tr> <tr> <td>Nei...</td> <td>10</td> </tr> <tr> <td>Agr...</td> <td>40</td> </tr> <tr> <td>Str...</td> <td>45</td> </tr> </tbody> </table>	Category	Count	Str...	0	Dis...	5	Nei...	10	Agr...	40	Str...	45	<p>4.24</p>
Category	Count													
Str...	0													
Dis...	5													
Nei...	10													
Agr...	40													
Str...	45													





## Recommendations for improvement

In line with the main results of the survey, it could be concluded and recommended the following towards improvements in teaching and learning of healthcare profession education:

- ✓ involvement of criteria “innovations in existing programs” and “improvement of teaching quality” as evaluated criteria for academic staff promotion
- ✓ Increase of academic staff participation in formal activities related to teaching competencies development particularly in formal qualification (degree, diploma, certificate), supervised/peer-assessed teaching process, research project concerning pedagogy, as well as in conferences/symposia with pedagogy related topics.
- ✓ In line with revealed high level of need for additional education related to many aspects of teaching, learning and assessment, programs of continuing professional development of academic staff involved in healthcare professions education is necessary. Such programs in RS have to be primarily directed to teaching students with special learning needs, student assessment, instructional design - design, planning and implementation of a lesson/course, and large group (classroom) management.
- ✓ Positive attitudes and beliefs of study sample have identified group of academicians with very strong intrinsic motivation for teaching and learning improvements, but the low number of study participants may indicate the absence of such motivation in the majority of academic staff people. Accordingly, the importance of teaching competencies development as a foundation for the development of the culture of effective teaching and learning, and driving force for transformation of health professions education in line with the emerging demands in healthcare and rapidly changing professional roles, have to be promoted within academic institutions.



## References

1. Srinivasan M, Li ST, Mayers FJ, et al . “Teaching as a Competency”: Competencies for Medical Educators. *Acad Med.* 2011;86:1211–1220.
2. Görlitz A, Ebert T Baue T, et al. Core Competencies for Medical Teachers (KLM) – A Position Paper of the GMA Committee on Personal and Organizational Development in Teaching. *GMS Zeitschrift für Medizinische Ausbildung* 2015, Vol. 32(2), ISSN 1860-3572
3. WHO. Nurse educator core competencies. Available at:  
[http://www.who.int/hrh/nursing\\_midwifery/nurse\\_educator050416.pdf](http://www.who.int/hrh/nursing_midwifery/nurse_educator050416.pdf)
4. Academy of Medical Educators A Framework for the Professional Development of Postgraduate Medical Supervisors. Guidance for deaneries, commissioners and providers of postgraduate medical education, *November 2010, London*
5. <https://amee.org/home>





**Appendix 1. Current requirement related to academic staff promotion at Erasmus+ ReFEEHS participants institutions**

INSTITUTION	Existence of official document for evaluation of pedagogical activities for teacher?	Evaluation of the pedagogical activities is one of mandatory requirement for teacher appointment	If YES, provide the name of the document(s)	Pedagogical competence 1: positive grade on pedagogical work through student survey (min good (3))	Pedagogical competence 2: positive grade on accession lecture*	Other pedagogical competencies (provide the name of the competencies)	How are evaluating competencies?
<b>The National Council for Higher Education</b>	YES	YES	Minimum qualifications for promotion of academic staff at the university. National Council for Higher Education 2015 & 2016	YES	YES	/	/
<b>University of Belgrade (UB)</b>	YES	YES	Criteria on promotion of academic staff at University of Belgrade, 2015	YES	YES	/	/
Faculty of Pharmacy (FP)	YES	YES	Statute book, Faculty of Pharmacy 2015; Policy on criteria for promotion of academic staff at the Faculty of Pharmacy, 2018	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph); mentoring of undergraduate students' thesis; mentoring of postgraduate students' thesis or participation in postgraduate students' thesis committee;	Academic Promotions Committee

Faculty of Medicine (FM)	YES	YES	Statute book Faculty of Medicine, 2016; Policy on criteria for promotion of academic staff at the Faculty of Medicine - University of Belgrade 2018	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph); mentoring of undergraduate students' thesis; mentoring of postgraduate students' thesis or participation in postgraduate students' thesis committee;	Academic Promotions Committee
Faculty of Dental Medicine (FDM)	YES	YES	Statute book Faculty of Dental Medicine 2009; Policy on employment and promotion of academic staff at the University of Belgrade	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph); mentoring of undergraduate students' thesis; mentoring of postgraduate students' thesis or participation in postgraduate students' thesis committee;	Academic Promotions Committee
University of Kragujevac	YES	YES	Policy on employment and promotion of academic staff at the University of Kragujevac, 2017	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph), creation of students assignments; Alternative criteria: creating of teaching materials (demonstrating case studies, etc.), preparation and/or handling of the curriculum or study program; leading of department; active participation/organisation of clinical meetings or journal clubs; managing the work of associates in teaching, assistants, interns, specialists; mentoring of students' research work; tutorial work with students	Academic Promotions Committee



Faculty of Medicine	YES	YES	Policy on employment and promotion of academic staff at the University of Kragujevac, 2018	YES	YES	Obligated criteria: preparing of learning literature (book, workbook, tutorial, monograph), creation of students assignments; Alternative criteria: creating of teaching materials (demonstrating case studies, etc.), development and/or handling of the curriculum or study programme; leading of department; active participation/organization of clinical meetings or journal clubs; managing the work of associates in teaching, assistants, interns, specialists; mentoring of students' research work; tutorial work with students	Academic Promotions Committee
University of Novi Sad (UNS)	YES	YES	Statute book UNS 2012; Rules on criteria for promotion of teachers at the UNS 2013	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph): mentoring of undergraduate students' thesis; mentoring of postgraduate students' thesis or participation in postgraduate students' thesis committee	Academic Promotions Committee
University of Niš (UNI)	YES	YES	Statute book UNI 2014. Glasnik UNI 8/14; Guidance on criteria for teachers 2015	YES	YES	Obligated criteria for promotion as associate or full professor: preparing of learning literature (book, workbook, tutorial, monograph): mentoring of undergraduate students' thesis; mentoring of postgraduate students' thesis or participation in postgraduate students' thesis committee	Academic Promotions Committee
Trinity College, University of Dublin	YES	YES	Consolidated Statutes of Trinity College, Dublin and of the University of Dublin, 2010; Procedures for Advancement; Guidance on Criteria	YES	NO	"Developed successful teaching programmes"; "Introduced innovations of significance in existing programmes"; "Commitment to enhancing the teaching quality"	Academic Promotions Committee



<b>Medical University Sofia</b>	NO	NO	/	/	/	/	/
<b>Faculty of Pharmacy, University of Lisbon</b>	YES	YES	Estuato da Carreira Docente Universitaria (ECDU) 2010; Estatutos da UL; Regulamento da UL em matéria de concursos da carreira docente	YES	YES	"Developed teaching function"; "Innovation in pedagogy, namely e-learning course or activities"; "Dedication and quality of the professional activities related to teaching"	Academic Promotions Committee
<b>University of Pecs</b>	NO	YES	Year 2011. CCIV. Law on the national higher education	NO	NO	/	/



Appendix 2. Differences between RS and EU academic staff participation in activities related to pedagogical knowledge and skills improvement, and the impact of these activities at development as a teacher

	No	Yes, with no impact	Yes, with small impact	Yes, with moderate impact	Yes, with large impact
<i>Courses/Workshops with education-related topics</i>					
RS	37.3	7.2	9.6	28.9	16.9
EU	25.8	3.2	16.1	19.4	35.5
Total	34.2	6.1	11.4	26.3	21.9
<i>Conferences/symposia concerning education</i>					
RS	<b>50.6</b>	4.8	<b>9.6</b>	24.1	10.8
EU	<b>29.0</b>	9.7	<b>25.8</b>	12.9	22.6
Total	44.7	6.1	14.0	21.1	14.0
<i>Formal qualification (degree, diploma, certificate)</i>					
RS	72.3	6.0	7.2	8.4	6.0
EU	67.7	3.2	9.7	6.5	12.9
Total	71.1	5.3	7.9	7.9	7.9
<i>Study visit to other higher education institution</i>					
RS	55.4	3.6	7.2	12.0	21.7
EU	45.2	3.2	9.7	22.6	19.4
Total	52.6	3.5	7.9	14.9	21.1
<i>Participation in research project concerning pedagogy</i>					
RS	56.6	2.4	9.6	16.9	14.5
EU	54.8	0	12.9	6.5	25.8
Total	56.1	1.8	10.5	14.0	17.5
<i>Supervised/Peer-assessed teaching process</i>					
RS	66.3	10.8	2.4	9.6	10.8



EU	54.8	6.5	16.1	12.9	9.7
Total	63.2	9.6	6.1	10.5	10.5
<i>Reading of professional literature about pedagogy</i>					
RS	27.7	6.0	15.7	24.1	26.5
EU	41.9	3.2	16.1	29.0	9.7
Total	31.6	5.3	15.8	25.4	21.9
<i>Engaging in informal dialogue with colleagues on how to improve teaching</i>					
RS	3.6	7.2	19.3	41.0	28.9
EU	6.5	19.4	25.8	22.6	25.8
Total	4.4	10.5	21.1	36.0	28.1



Appendix 3. Differences between RS and EU academic staff professional development needs

	No need at all	Low level of need	Moderate level of need	High level of need
<i>Drawing up the content and delivering theory classes</i>				
RS	7.2	<b>16.9</b>	<b>51.8</b>	24.1
EU	16.1	<b>51.6</b>	<b>22.6</b>	9.7
Total	9.6	26.3	43.9	20.2
<i>Drawing up the content and delivering practical classes</i>				
RS	13.3	<b>20.5</b>	<b>45.8</b>	20.5
EU	19.4	<b>45.2</b>	<b>22.6</b>	12.9
Total	14.9	27.2	39.5	18.4
<i>Student assessment</i>				
RS	8.4	<b>15.7</b>	44.6	<b>31.3</b>
EU	6.5	<b>54.8</b>	25.8	<b>12.9</b>
Total	7.9	26.3	39.5	26.3
<i>Large group (classroom) management</i>				
RS	14.5	<b>20.5</b>	38.6	26.5
EU	3.2	<b>48.4</b>	35.5	12.9
Total	11.4	28.1	37.7	22.8
<i>Instructional design - design, planning and implementation of a lesson/course</i>				
RS	12.0	27.7	<b>31.3</b>	28.9
EU	9.7	22.6	<b>54.8</b>	12.9
Total	11.4	26.3	37.7	24.6
<i>ICT skills in teaching</i>				
RS	10.8	19.3	49.4	20.5
EU	12.9	35.5	38.7	12.9

Total	11.4	23.7	46.5	18.4
<i>Teaching students with special learning needs</i>				
RS	12.0	19.3	32.5	36.1
EU	19.4	25.8	19.4	35.5
Total	14.0	21.1	28.9	36.0
<i>Student discipline and behaviour problems</i>				
RS	26.5	41.0	20.5	12.0
EU	29.0	35.5	19.4	16.1
Total	27.2	39.5	20.2	13.2
<i>Administration, documentation and student management</i>				
RS	22.9	41.0	24.1	12.0
EU	25.8	35.5	35.5	3.2
Total	23.7	39.5	27.2	9.6
<i>Student counseling/guidance</i>				
RS	15.7	25.3	37.3	21.7
EU	12.9	32.3	38.7	16.1
Total	14.9	27.2	37.7	20.2

