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**“CHANGE IN CLASSROOM: PROMOTING INNOVATIVE TEACHING &
LEARNING TO ENHANCE STUDENT LEARNING EXPERIENCE IN
EASTERN PARTNERSHIP COUNTRIES”, PRINTeL**

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NEEDS ANALYSIS REPORT

**Results of the Surveys on
Teaching Staff Development Needs Assessment
and Student Learning Needs Assessment**

Telavi 2018

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Introduction

The surveys were conducted in accordance with the PRINTEL project activities titled: “Change in Classroom: Promoting Innovative Teaching & Learning to Enhance Student Learning Experience in Eastern Partnership Countries” within the frames of the Erasmus+ program. They were aimed at the implementation of the relevant specific objectives arising from the main aims of the project and implemented within the framework of the Work Package 1 titled: “Strengthening Teaching Staff Development Centres (TSDCs) in PC HEIs”. In accordance with the plan for the implementation of this package activities, it was planned to establish Task Force-2 (TF2) which would develop and conduct “Teaching staff professional development needs assessment” and “Student learning needs assessment” surveys subsequent by producing a Need Analysis Report based on the surveys` results for assessing the training needs of the teaching staff & required facilities for TSDCs. The questionnaire for “Teaching staff professional development need assessment” survey includes 7 sections, as follows: 1. General information; 2. Teaching styles and pedagogical approaches used in class; 3. Learning styles and approaches; 4. Assessment methods and approaches; 5. Use of technology, e-teaching & social media for teaching and support of learning; 6. Facilities to support teaching; 7. Teaching materials.

The designed questionnaire for “Student learning needs assessment” consists of the following 7 sections: 1. General information; 2. Teaching styles and approaches in class; 3. Learning styles and approaches; 4. Assessment methods and approaches; 5. Use of technology, e-teaching & social media for teaching and support of learning; 6. Facilities to support teaching; 7. Educational materials to support teaching. Additionally, in both questionnaires the gender and age differences of the survey participants which were reflected in the respective analytical diagrams were also taken into account. Below is a description of the method of analyzing the data obtained in sections 2-7. The survey data were imported from the Google Form and interpreted in a format suitable for quantitative analysis. To compare the results of the survey with similar data from other universities, the data were presented in the modified form, and these processing was carried out using the Microsoft Excel graphical toolkit. In the table below, the weighting coefficients of the degree of relevance of the options selected are presented. For the “Currently Used” option the weighting coefficient is assumed to be 3.

1	High need or Highly effective	4
2	Medium need or Partially effective	3
3	Low need or Less effective	2
4	No need or Not effective	0
5	Currently Used	3

Section 1: General Information

The quantitative differences of the teaching staff and the students of the participating in the project universities were taken into account; the minimum indicators of the respondents in both categories were established.

Table of Interpretation of Survey Questions in Scores

University	Minimum responses of the students	Minimum responses of the teaching staff
YSU, ISU, BSU	80	40
NPUA, GTU, BrSTU	60	30
VSU, TeSaU, YKSUG	40	20

In the conducted surveys in TESAU respectively, 22 teaching staff and 41 BA and MA program students were involved. The questionnaires were almost the same for teachers and students and it caused some concerns at the beginning. It was crucial to conduct meetings with teachers and students, give some explanation of terminology used in the survey such as teaching styles and approaches, advanced technology in education. The meetings were held separately with each group before starting the survey. All the respondents in both groups had printed Georgian translation of the questionnaire forms in order to ensure gathering of valid data. The survey was conducted in July, 2018.

22 teachers participated in the survey. A majority of those teachers (77%) were a full time faculty member. Equal number of full professors and assistant professors, 13.6 %, took part in the study. About 40% of the respondents had the academic position of Associate professor and about 31% were lecturers. The figure 1.1 illustrates these data.

1.2. What is your title at your university?

22 responses

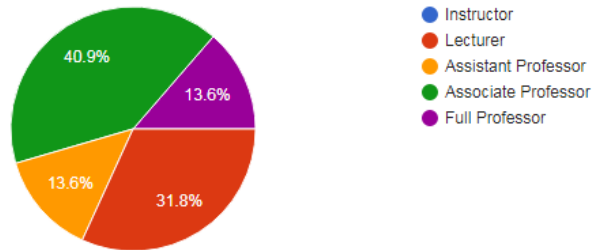


Figure 1.1

As for the age of the participants, about half of the participants, about 46%, were between 30-39. About 23% belonged to the age group of 50-59. The least represented age group was 20-29 with one response, 4,5% (See figure 1.2). There were 15 female and 7 male in the survey.

1.3. Please select your age group from the following:

22 responses

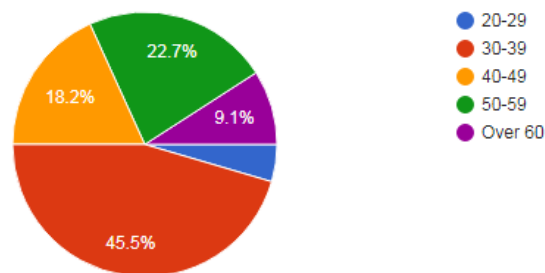


Figure 1.2

The questionnaire form was sent to 44 students' emails and the link to the form was shared to 5 students as a private message via Facebook. 41 students filled in the form. About 43,9% of the students were Master students and the rest, about 56,1 %, were at Bachelor level. About 37% were male and the rest – 63% female. Figure 3 visually represents the numbers of students at different academic levels in survey.

1.2. Student educational level

41 responses

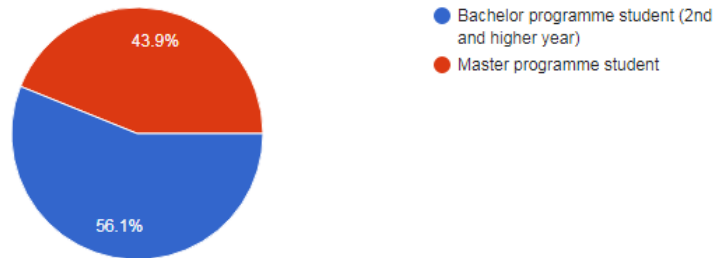


Figure 1.3

Section 2: Teaching styles and pedagogical approaches

In question 2.1.the teachers had to choose from the list of 20 approaches and techniques in the questionnaire the ones that they currently use at university. (See table 1, figure 2.1)

Table 1

Teachers' preferable style	N of responses
Seminars	19
traditional lecturing	17
discussions/debates	14
project based learning	11
problem based learning	11
game simulations/ role playing	10

In the students' questionnaire form, the list of teaching styles and approaches (Question 2.1) was the same as in teachers' questionnaire. In students' responses the most common teaching styles and approaches were Traditional lecturing and Seminars with 38 responses. 24 respondents thought that Discussion/debates were popular. Experience based learning and Problem based learning were chosen by 16 students (Figure 2.2).

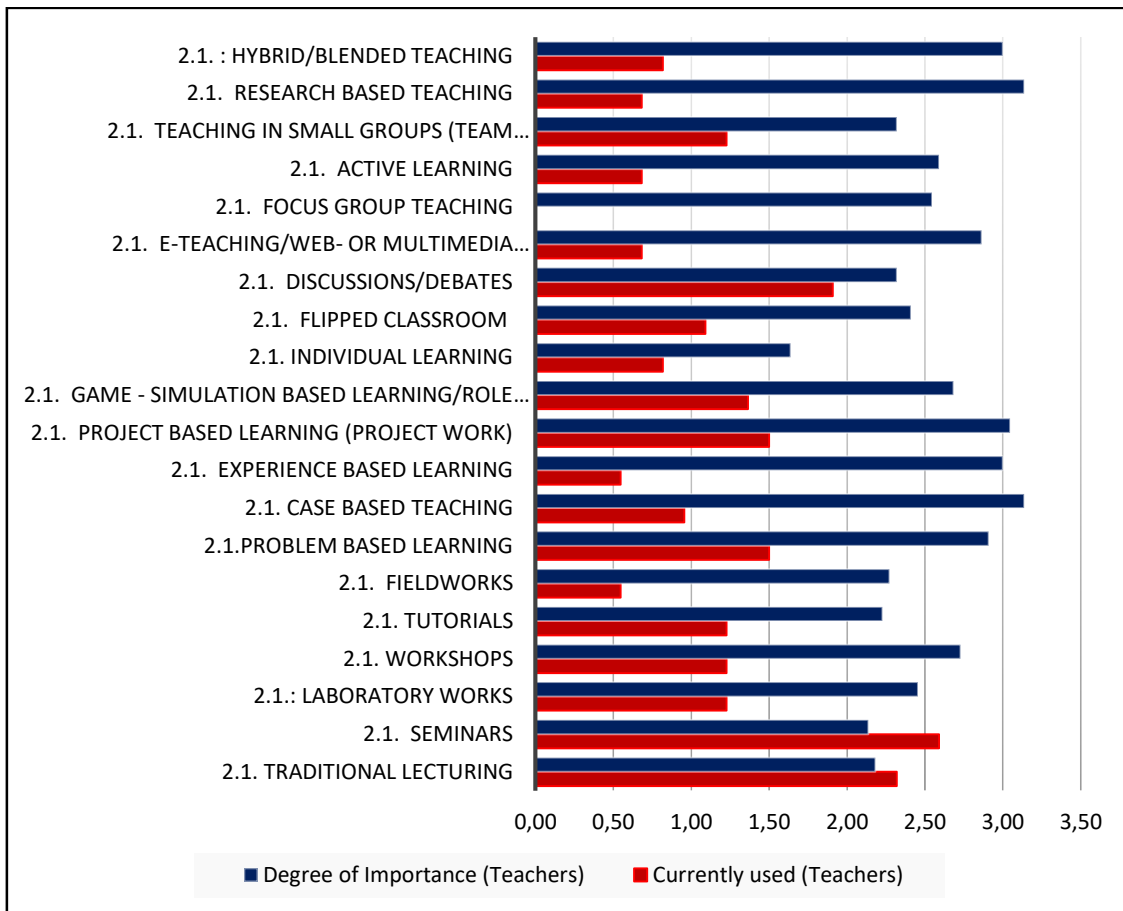


Figure 2.1

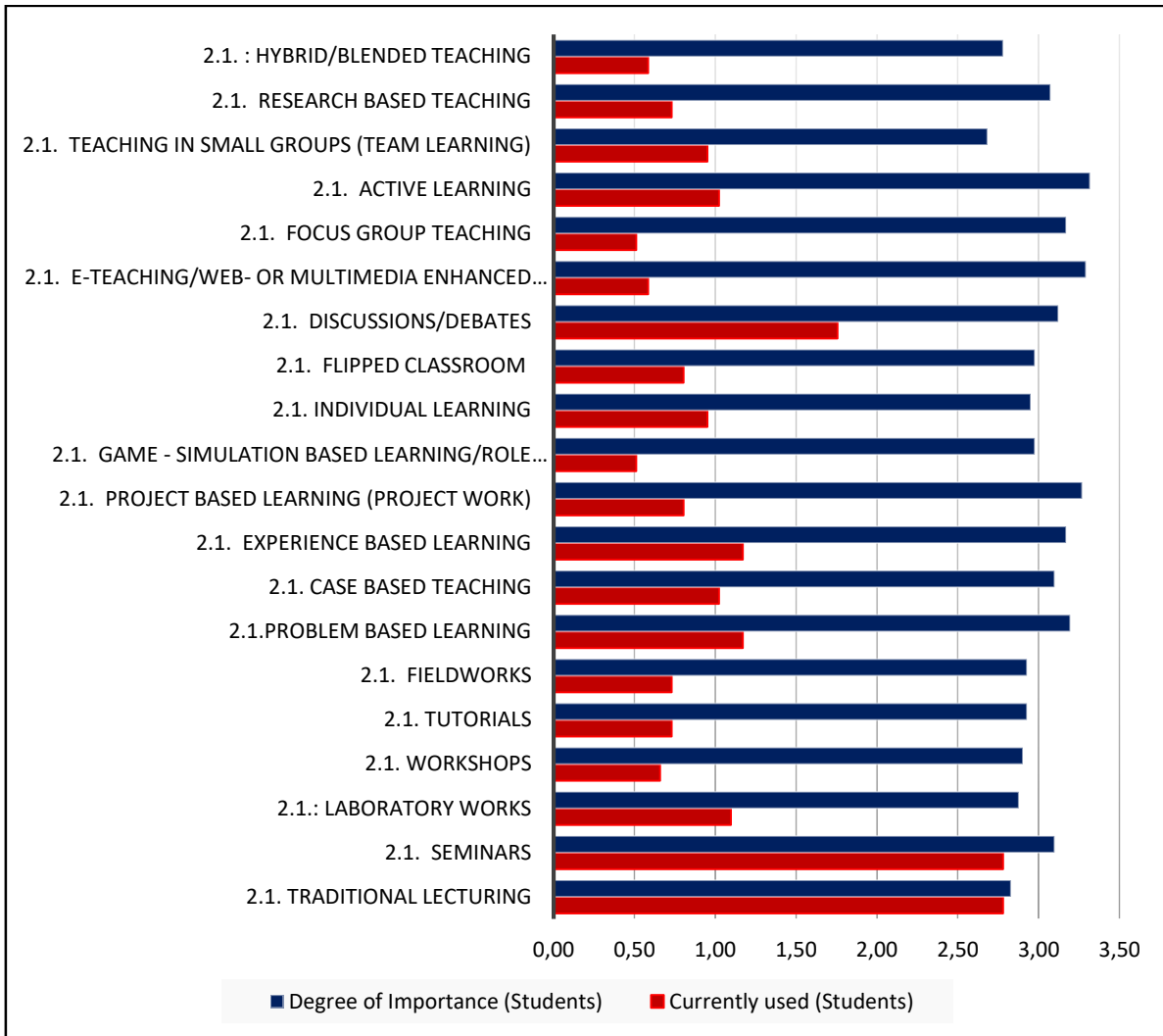


Figure 2.2

In question 2.2. the teachers had to disclose their needs for training courses in different teaching approaches and techniques from the same selection list. They gave preference to Case based teaching and Research based teaching. For students Active learning and E-teaching were significant approaches.

Comparison of the data (in the modified units) according to the style of teaching, proceeding from the level of need, without taking into account the degree of their use, is presented on the radar chart Fig. 2.3, which is characterized by comparatively greater visibility of the displayed data and convenience of analysis. The diagram clearly tracks the coinciding peaks and troughs, reflecting a certain consensus among the teaching staff and the students on this point of the survey.

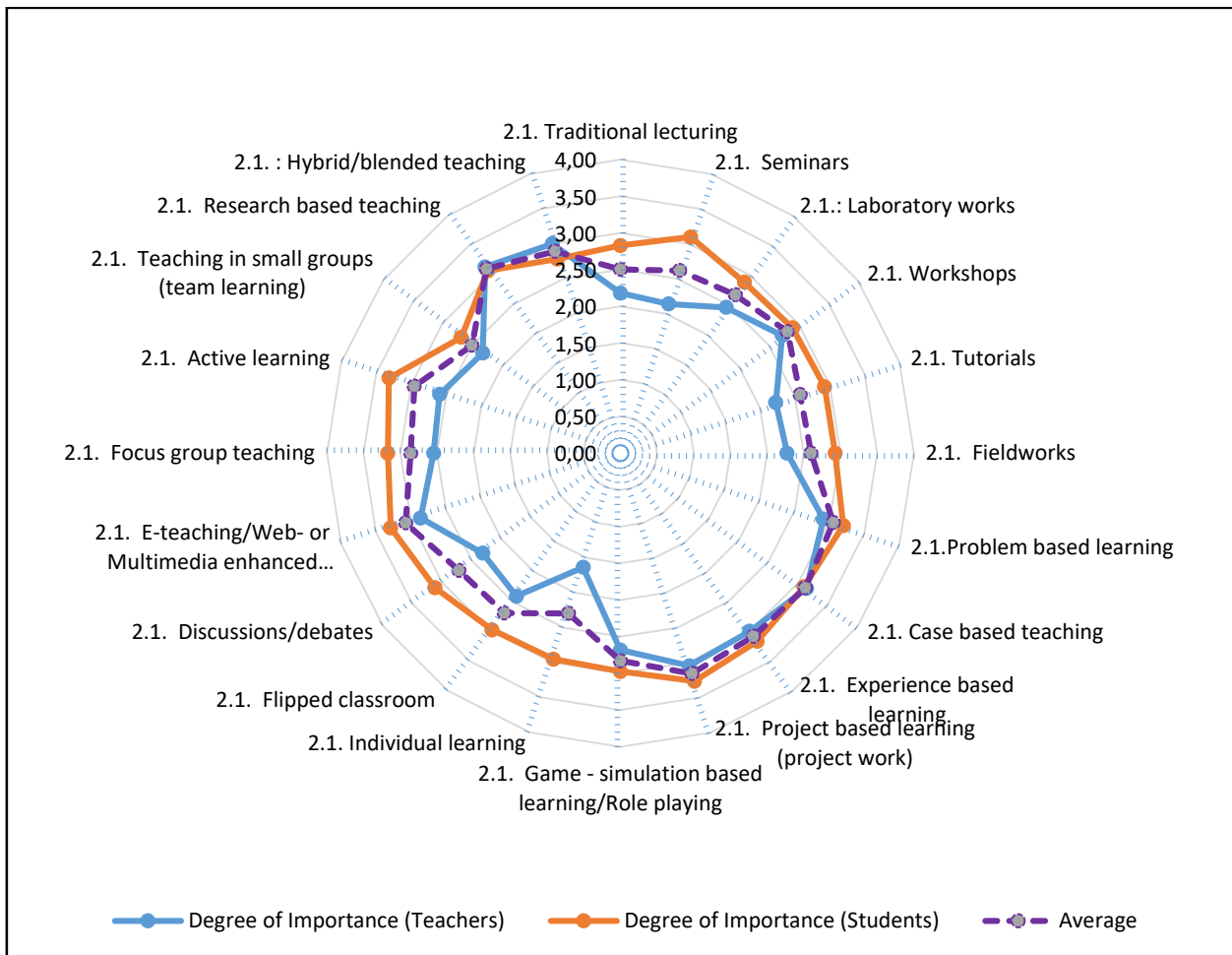


Figure 2.3

To determine the methods that are rated as more effective or demanded by the teaching staff and students a relative comparison is determined according to the method described above. The results are presented in diagrams 2.4 and 2.5.

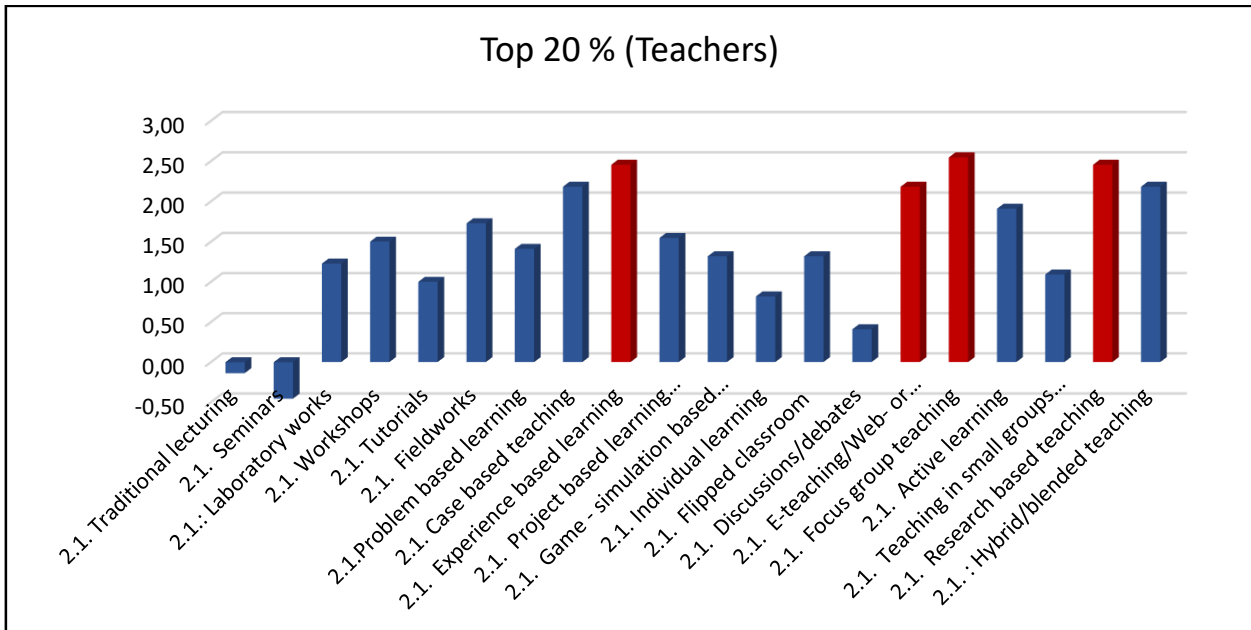


Figure 2.4

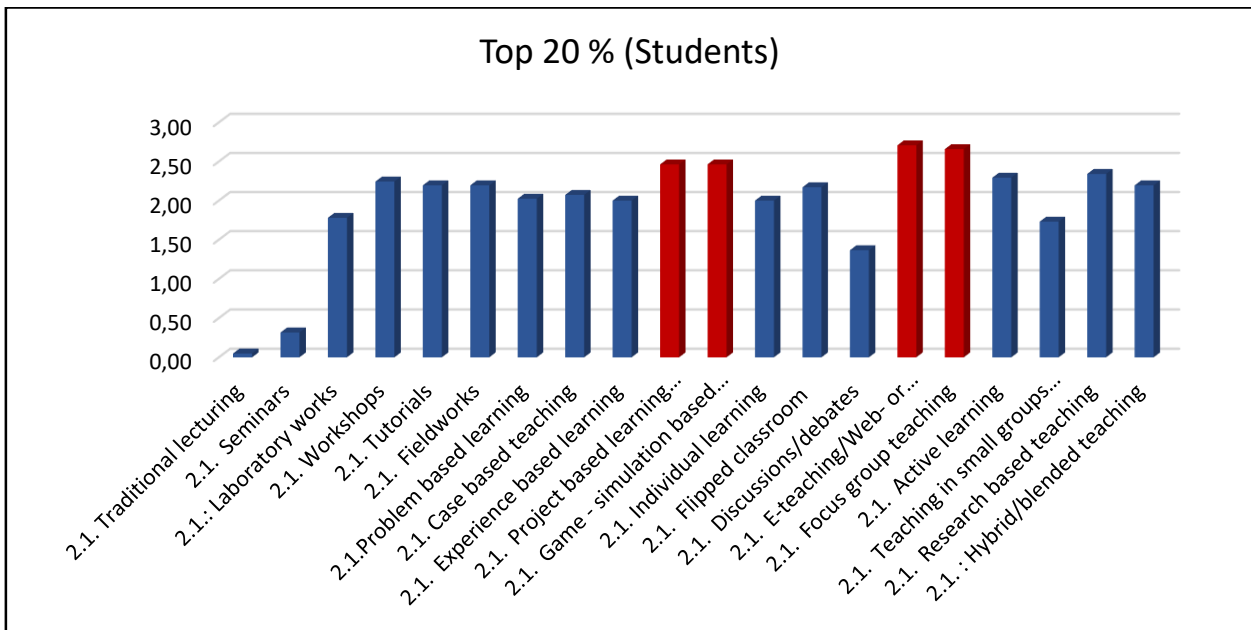


Figure 2.5

To sum up this section, according to figure 2.4 and 2.5 both, teachers and students, both believed the training in the following methods Experienced based learning, and E-teaching/Web and Multimedia enhanced teaching were essential. Teaching staff also considered training to be significant in Research based learning and Flipped classroom. As for students' preferences, besides

the abovementioned approaches, was given to Game simulation/role –play and Focus group teaching.

Section 3: Learning styles and approaches

In section 3.1 the teachers had to reflect on their students’ learning styles and approaches and choose from 16 suggestions of learning styles given in the questionnaire. The Power point and other interactive presentation got the highest number (20 responses), followed by Reading textbooks (19 responses), Attending lectures & taking notes and Engaging in classroom discussion (16 responses). The lowest number of responses (4) got the following learning styles/approaches: Doing experiments in lab, Engaging in logic games and brainstorming, and Engaging in online discussion questions. (Figure 3.1)

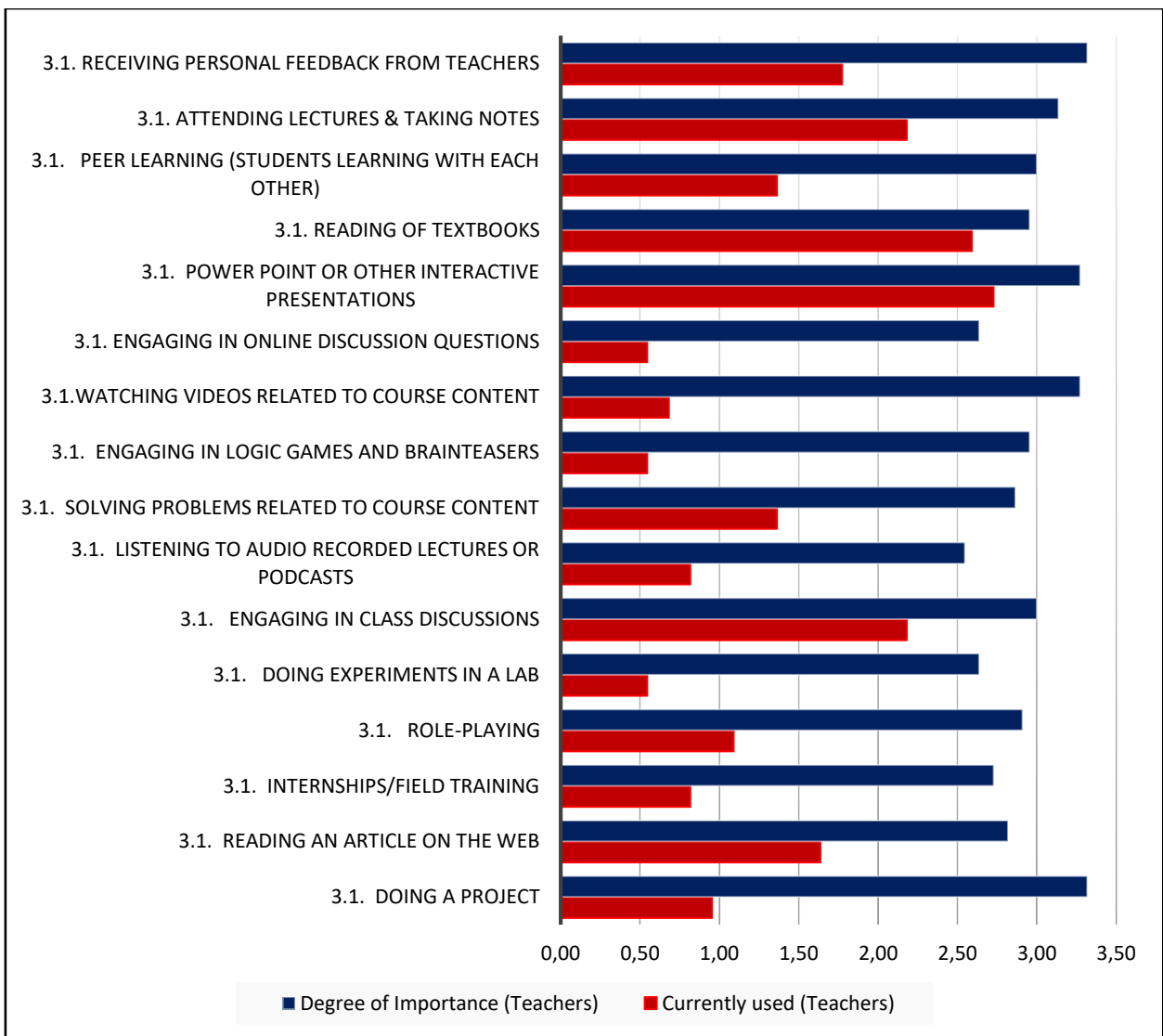


Figure 3.1

The students had to single out from the same list of learning styles that they had experienced. The highest number of responses was given to PowerPoint presentation or other interactive presentation (34 responses). The second most frequently experienced learning approach was Attending lectures/taking notes with 30 responses. Twenty six students learned by Reading a textbook and twenty five students were Engaged in classroom discussions. Other popular learning styles selected by students were Reading an article on the web (23 responses), Doing a project (22 responses) and Solving problems related to classroom content. Figure 3.2 visually represents these results.

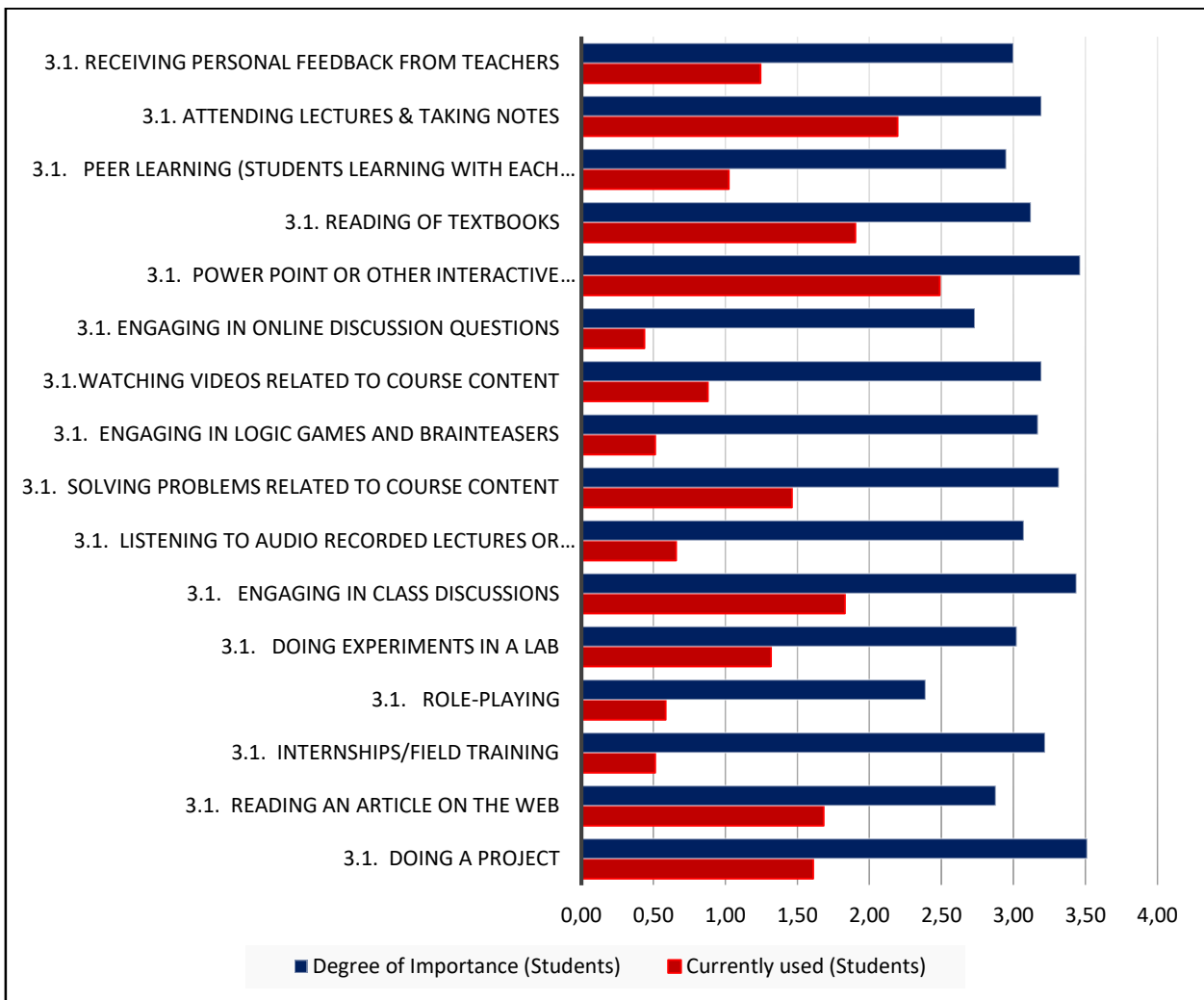


Figure 3.2

The comparison of the learning styles / approaches of the teaching staff and students in terms of the rate is shown on the radar chart, Fig. 3.3 which, like the corresponding diagram of the previous action, has some differences for both categories of the survey responses.

The presented radar chart diagrams, Fig. 3.3, show that for most of the survey options, the opinions of the teaching staff and students practically coincide. Meanwhile, certain small discrepancies were recorded in the following options: Engaging in class discussions, Doing experiments in the lab, Internships/field training and Listening to audio recorded lectures. Figures 3.4 and 3.5 show the relative comparisons for the teaching staff and students.

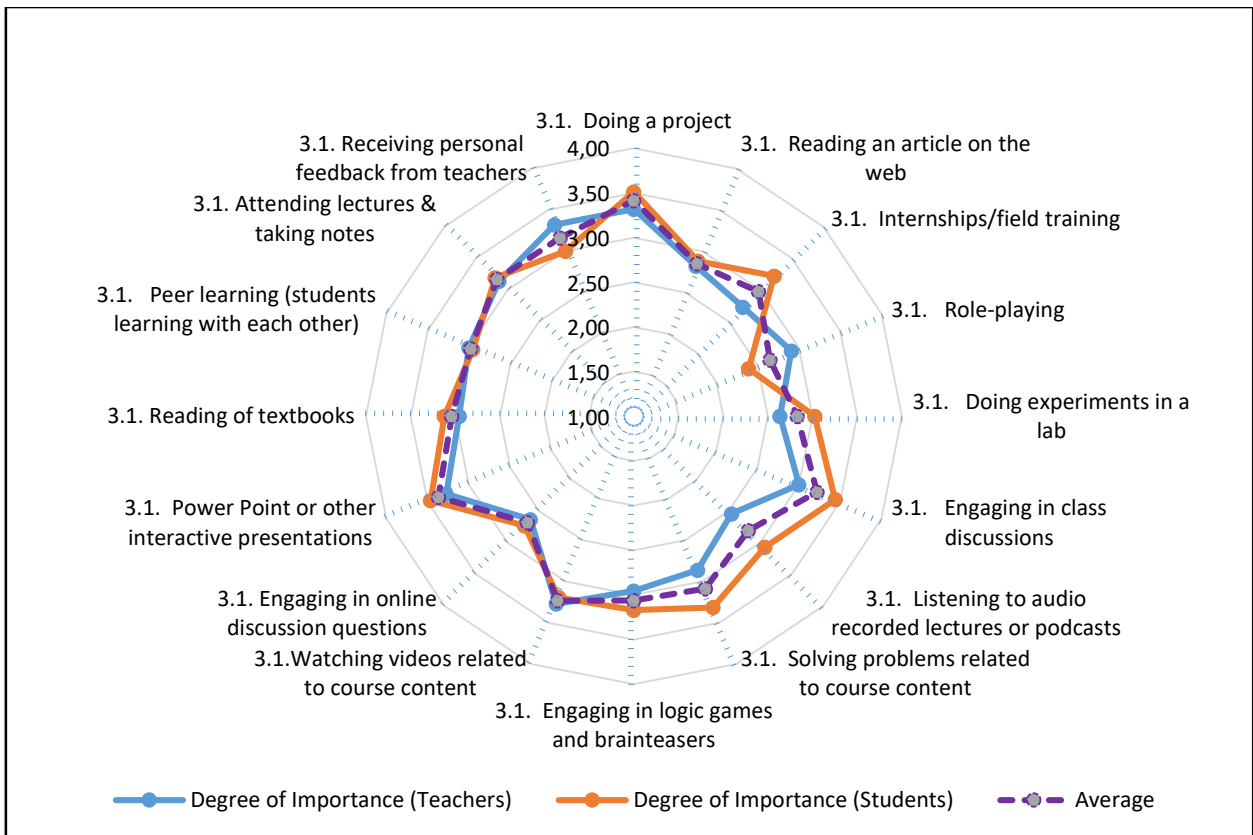


Figure 3.3

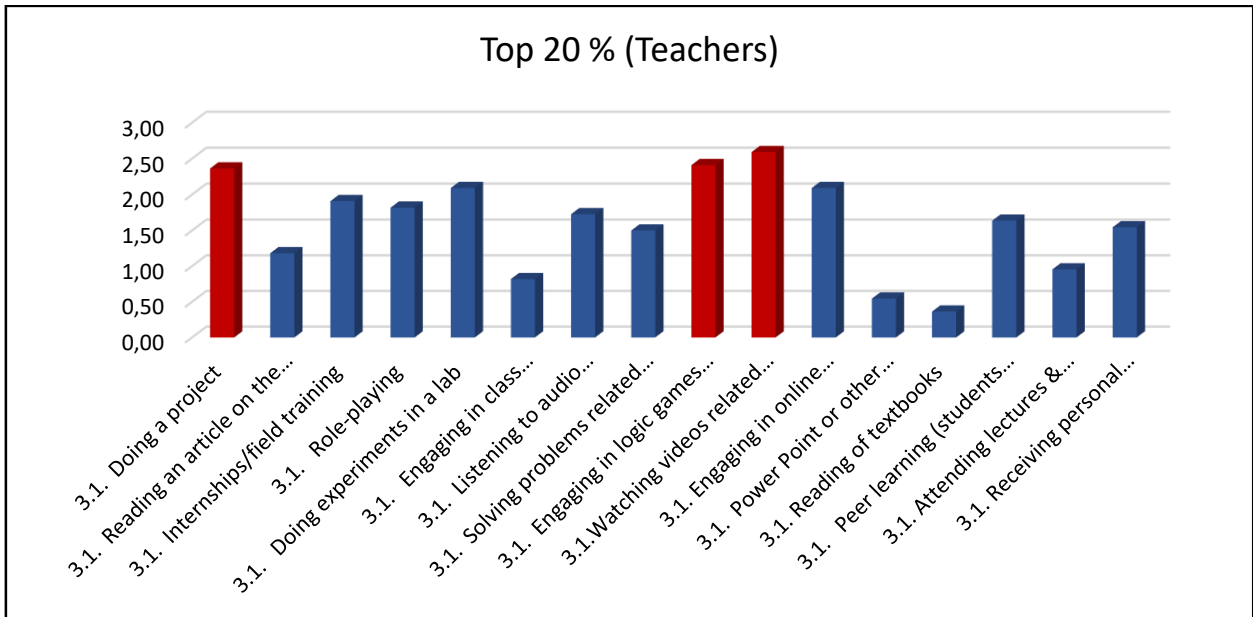


Figure 3.4

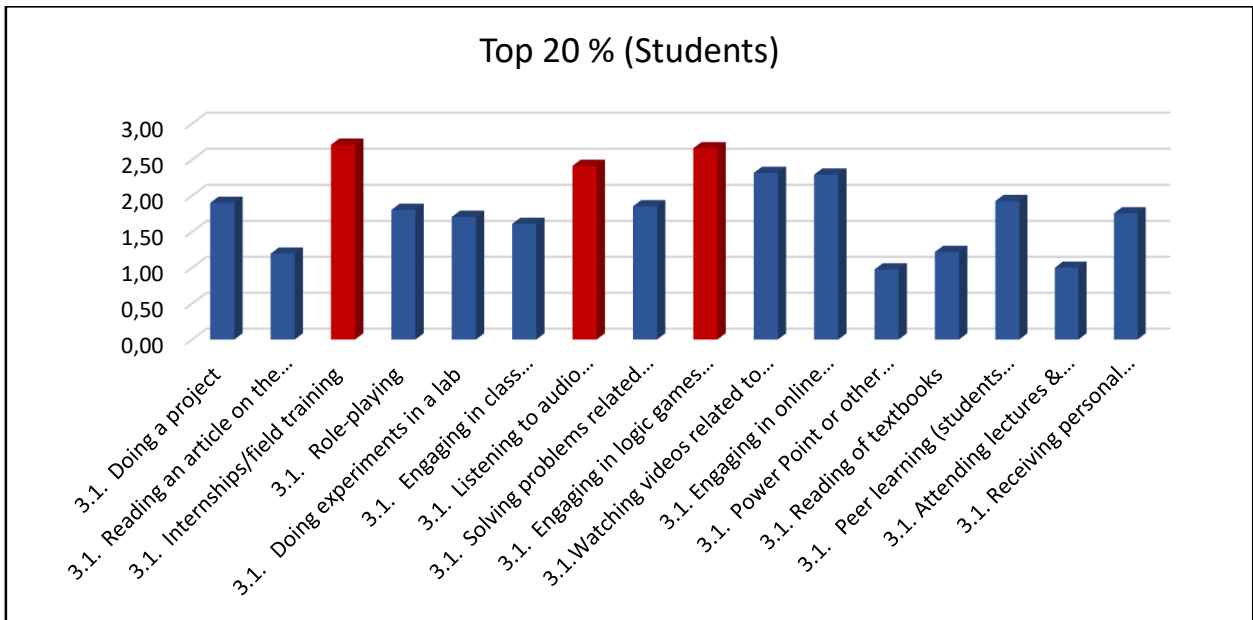


Figure 3.5

To conclude, teaching staff thought that Doing a project and Watching videos related to course content are highly effective learning styles. Both Students and teachers indicated that Engaging in logic games and brainteasers is effective. In addition, students believe that internships/field training and listening to audio recorded lectures are important approaches for learning.

Section 4: Assessment methods and approaches

In question 4.1 the teachers revealed which assessment methods and approaches were used in TESAU, and the ones that they would like to try in the future. Written tests were indicated by 18 teachers. Another common approach was standardized test chosen by 17 teachers. 13 teachers used assessment rubrics. About half of the respondents (11 teachers) used essay examination and summative assessment. The least popular assessment methods were written reflections by teacher, portfolios and student to student evaluation as only three teachers applied each of these methods. The approach in which instructor assessed projects, was not utilized at TESAU at all. Student to student evaluation, portfolios, self-evaluation, instructor-assessed projects were the assessment approaches that more than half of the teachers wanted to try in the future. (Figure 4.1).

As for students, written test with 33 responses was the most common form used to assess them. Standardized test was the second most popular assessment with 26 responses and 22 students experienced essay examinations. About half of the students were assessed by oral exams, summative and formative assessment. Only 8 students had been assessed with their portfolios, which was the lowest number of responses for an approach. Naturally, portfolios got most of the students' responses (22) as a desired assessment form. Similarly to teachers, 20 students wanted to experience assessment of projects by instructor. Other assessment approaches as review of students' assessment of projects and assessment rubrics were equally interesting for 19 students. The least desirable assessment approach was written exam with 6 responses. (Figure 4.2)

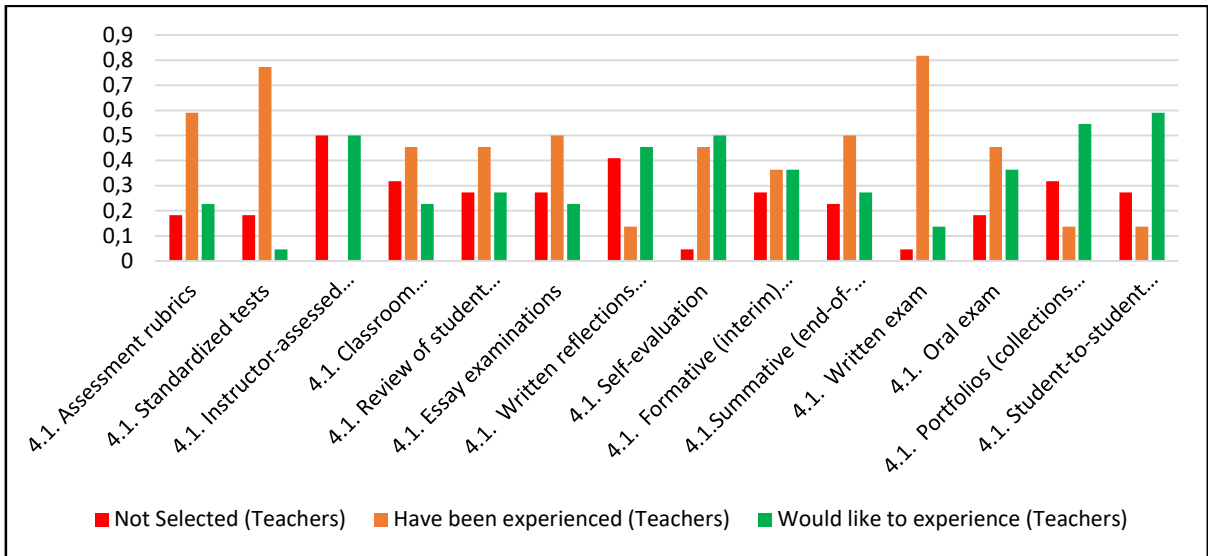


Figure 4.1

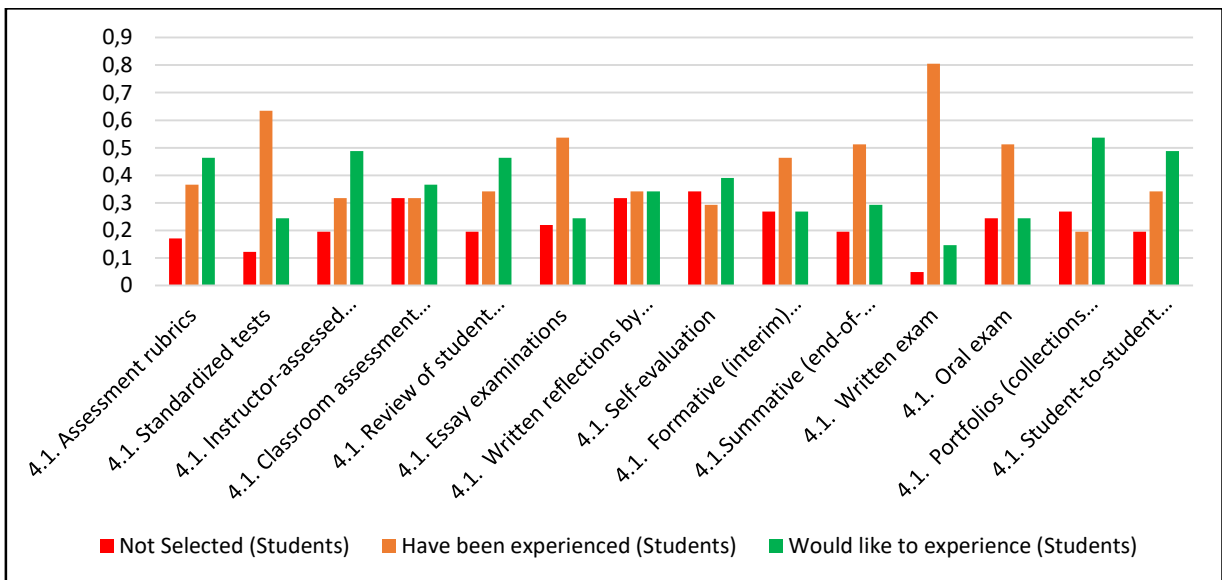


Figure 4.2

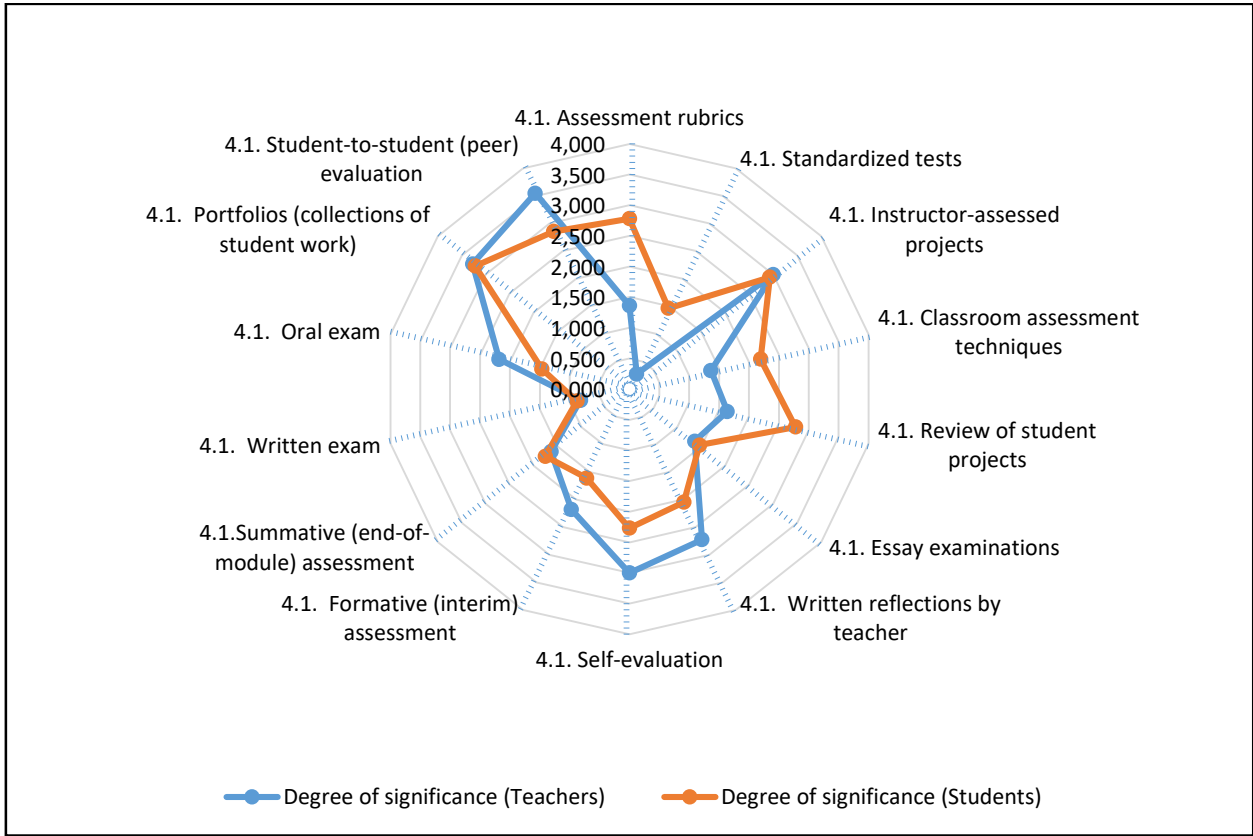


Figure 4.3

Analysis of the diagrams presented on the radar, Fig. 4.3, clearly shows that the teaching staff gives priority to the Instructor-assessed projects, Self-evaluation, Written reflections by teacher, and Student-to-student (peer) evaluation options. At the same time, there are coincidences with small differences in the opinions of the teaching staff and the students on the degree of significance for the Portfolios and Instructor-assessed projects options. Almost all of these methods of assessment the opinions of the students have similar trends.

	Degree of significance (Teachers)	Degree of significance (Students)
4.1. Assessment rubrics	1.364	2.780
4.1. Standardized tests	0.273	1.463
4.1. Instructor-assessed projects	3.000	2.927
4.1. Classroom assessment techniques	1.364	2.195
4.1. Review of student projects	1.636	2.780
4.1. Essay examinations	1.364	1.463
4.1. Written reflections by teacher	2.727	2.049
4.1. Self-evaluation	3.000	2.268
4.1. Formative (interim) assessment	2.182	1.610
4.1. Summative (end-of-module) assessment	1.636	1.756
4.1. Written exam	0.818	0.878
4.1. Oral exam	2.182	1.463
4.1. Portfolios (collections of student work)	3.273	3.220
4.1. Student-to-student (peer) evaluation	3.545	2.854

Figure 4.4

To compare the calculated data of the "Degree of Significance" option with the data built in Google Form and the previous two diagrams, a Bar type diagram 4.5 was also constructed.

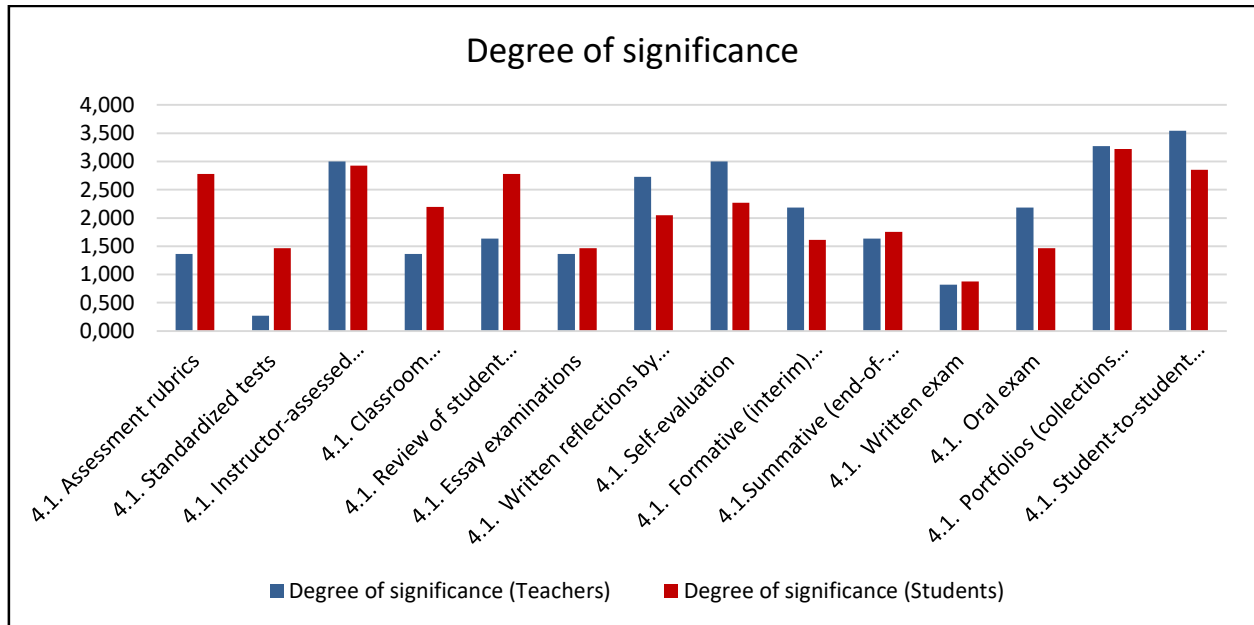


Figure 4.5

The figure 4.5 displays that Instructor assessed projects and Portfolios are appealing assessment forms for both teachers and students. The students, as well as teachers, are also interested in assessment forms such as Portfolios, Self-evaluation and Student-to-student evaluation with small differences in opinions.

Section 5: Use of technology, e-teaching/learning and social media for teaching and support of learning

Questions 5.1 and 5.2 included the items of advanced technology in education which were new for both teachers and students. We provided respondents with translation and explanation of each but still understanding could not be reached. 12 teachers, which is the highest number, indicated that Learning management systems are currently in use in TESUA. Six teachers said that they used Interactive whiteboard in their teaching and 5 teachers used Multimedia tools. No one used E-portfolios.

Digital games and Simulations, E-portfolios, and Social media were the technologies that the highest number of teachers (12) thought were very necessary, followed by Interactive whiteboards chosen by 11 teachers. The biggest number in category of medium need was given to Communities of e-learners (13) and Chat sessions (10).

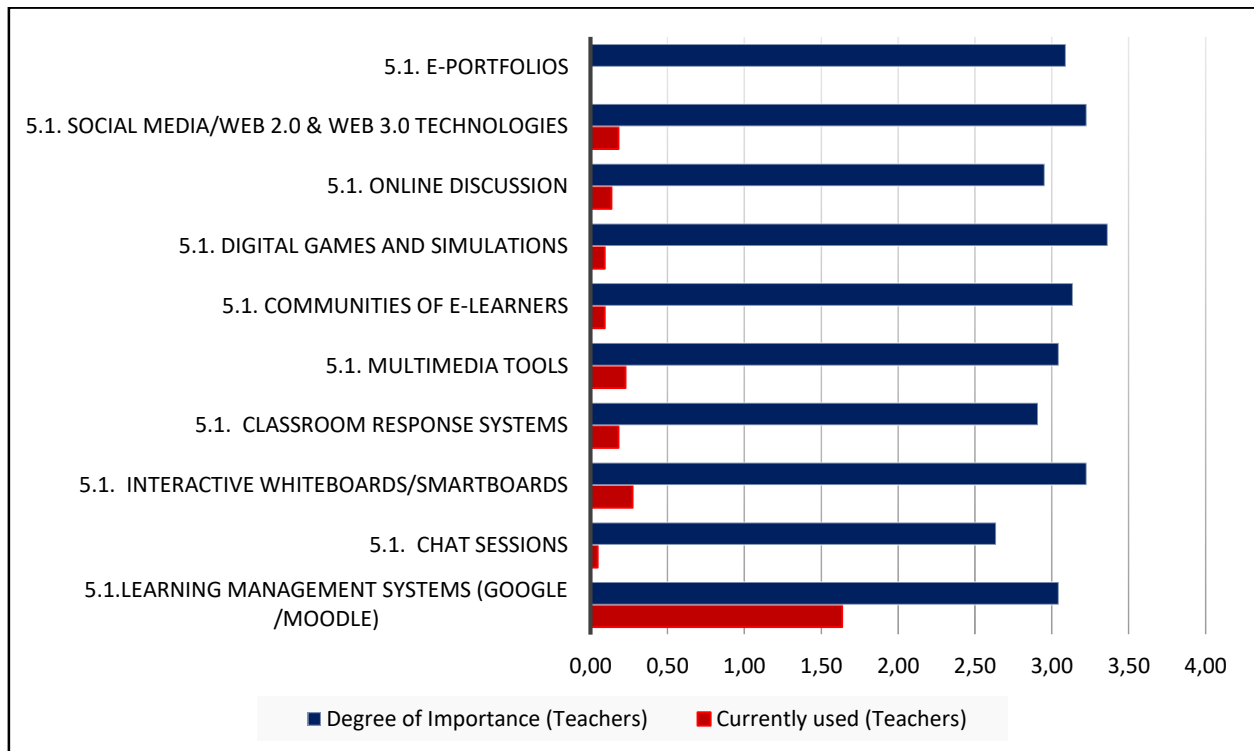


Figure 5.1

Most students (32) indicated that there are Learning management systems and 17 stated that multimedia was used in teaching. Some students completed the questionnaire without our training

relying on their English skill which was not enough to understand the names of the items on the education technology list in question 5.1. Thus, it is not surprising that 15 students reported having Classroom response systems and 7 students had been involved in working on E-portfolios; it is assumed that the respondents mixed them with teaching and assessment approaches (Figure 5.2).

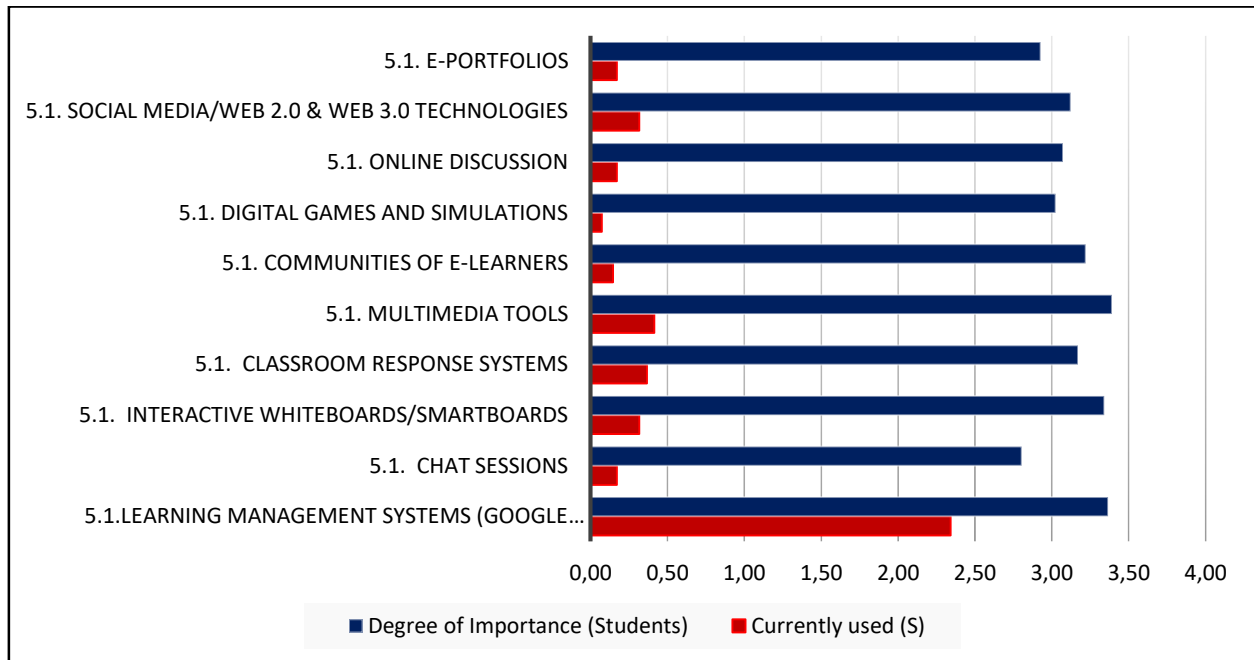


Figure 5.2

The students rated each type of technology in the list even though they did not experience most of them. The analysis of the data for the "Degree of Importance" option is shown on the radar in Figure 5.3. The nature of the lines of the diagram indicates a practical complete coincidence of the opinions of the respondents on the points of the survey.

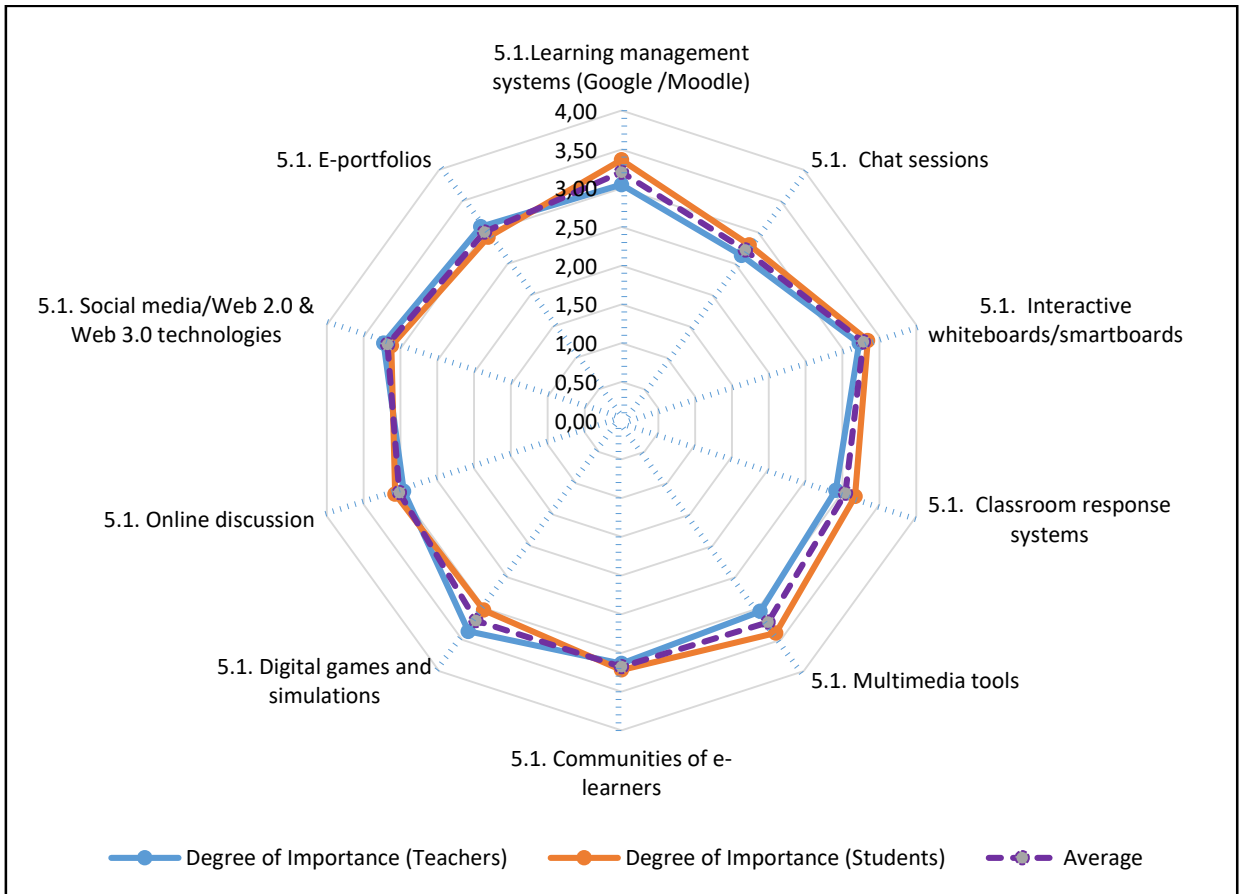


Figure 5.3

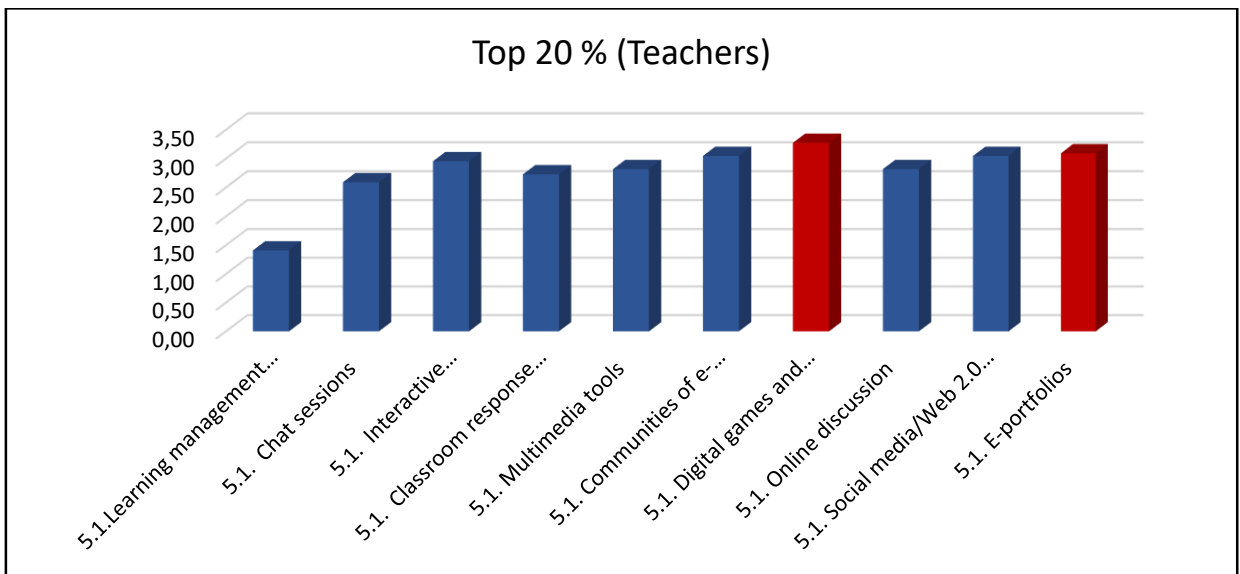


Figure 5.4

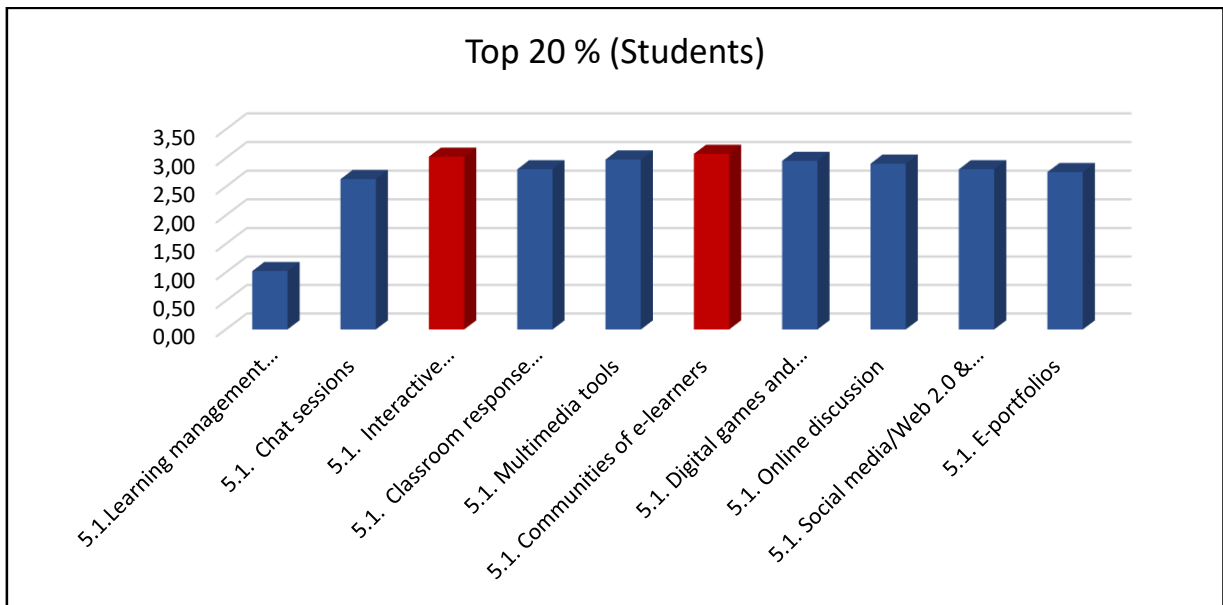


Figure 5.5

The estimated indicators for the degree of demand for the Communities of E-learners and Interactive whiteboards/smartboards, Digital games and simulations, E-portfolios with a top 20% allocation for both categories of respondents are shown in diagrams 5.4 and 5.5.

Section 6: Facilities to support teaching and learning

The survey results on this Section for the teaching staff and the students are shown in Figures 6.1 and 6.2. Almost all of the proposed options there is a certain interest of both focus groups. As for the degree of use, there is a lack of satisfaction of the respondents in modern equipment and high-speed Internet access. The types of facilities were explained to the respondents but the results showed that still the respondents gave incorrect responses.

According to the teaching staff opinion the most applicable facilities for teaching are High speed internet/WI-FI, Laptop computers, Printers, Copiers, and Scanners, Fig. 6.1. As for the significance of facilities, teaching staff believed that High Speed Internet/Wi-fi, interactive projectors and Laptop computers are extremely important.

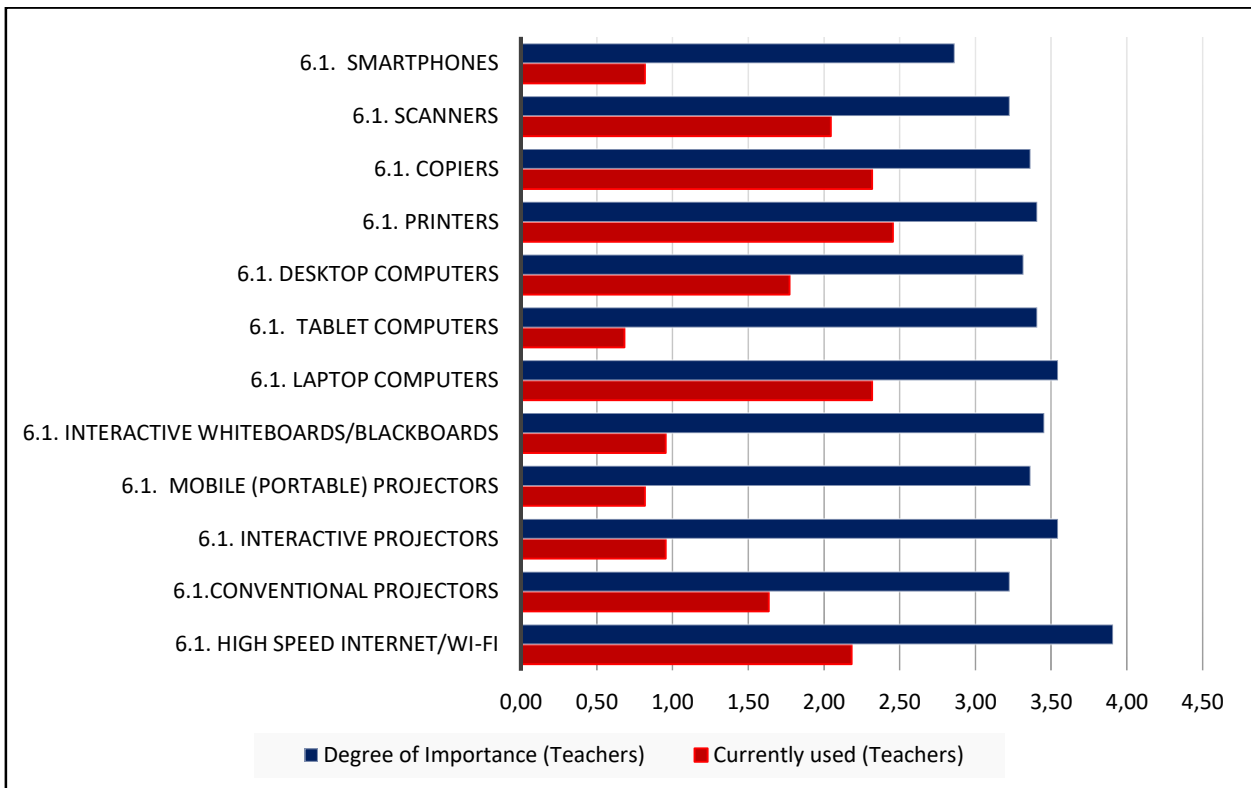


Figure 6.1

In students' answers there are some similarities to teachers' responses. Laptop computers, printer, copiers and conventional projectors are currently utilized facilities to support their learning. (Figure 6.2). Students thought that high speed internet/Wi-fi, Printers, Copiers, Laptop computers, conventional projectors were the most significant.

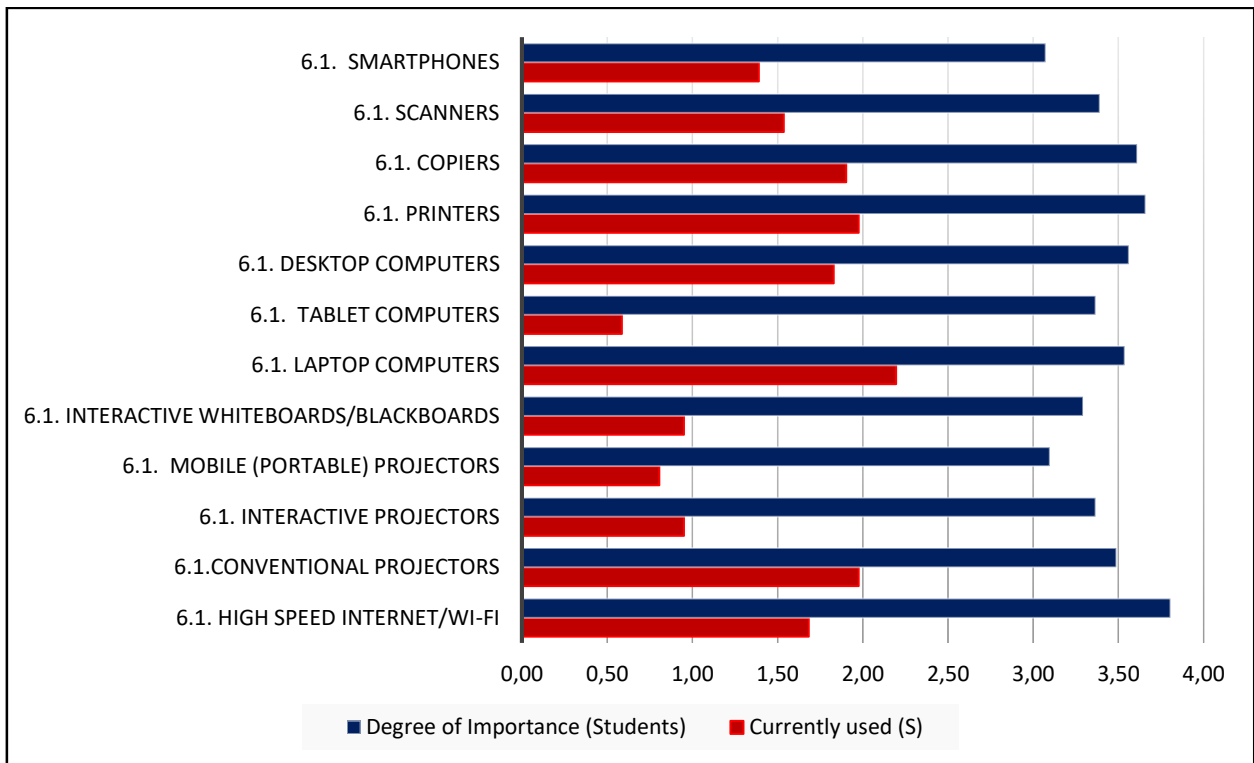


Figure 6.2

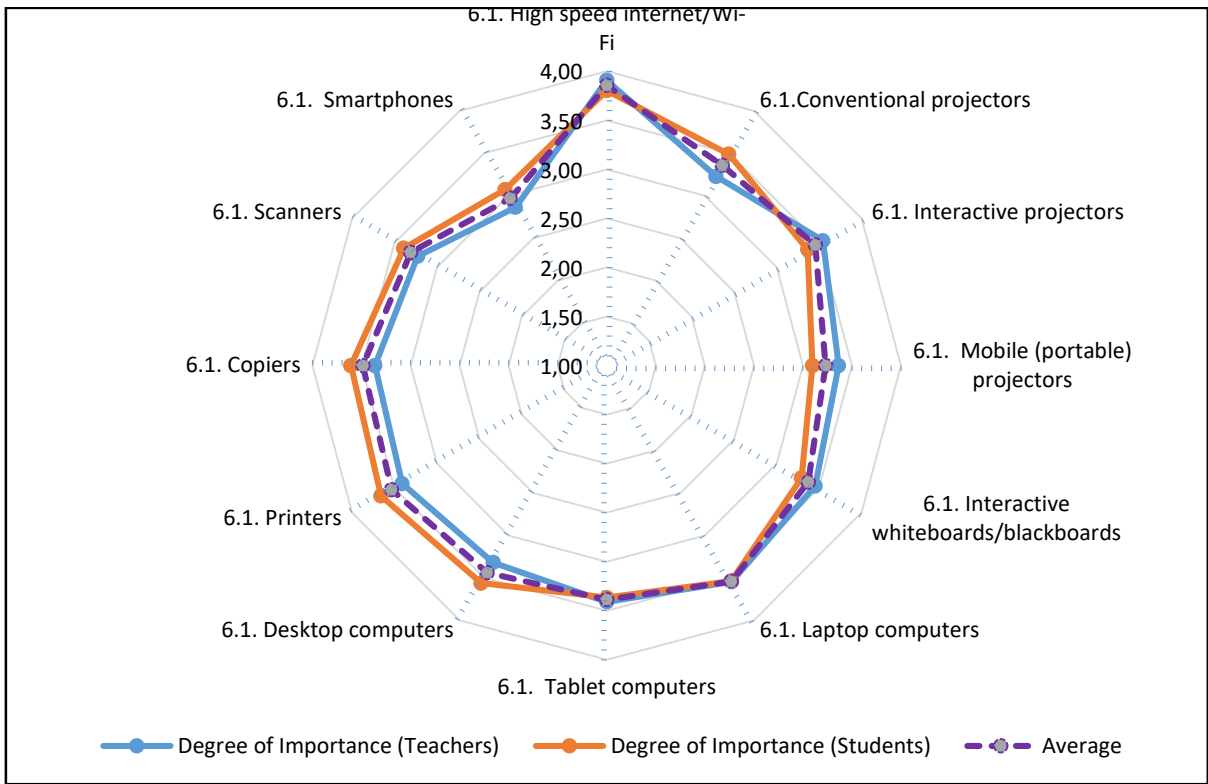


Figure 6.3

Judging from diagrams presented on the radar chart the teaching staff's and students' opinions concerning the use of the most preferable technical means practically coincide, Fig. 6.3.

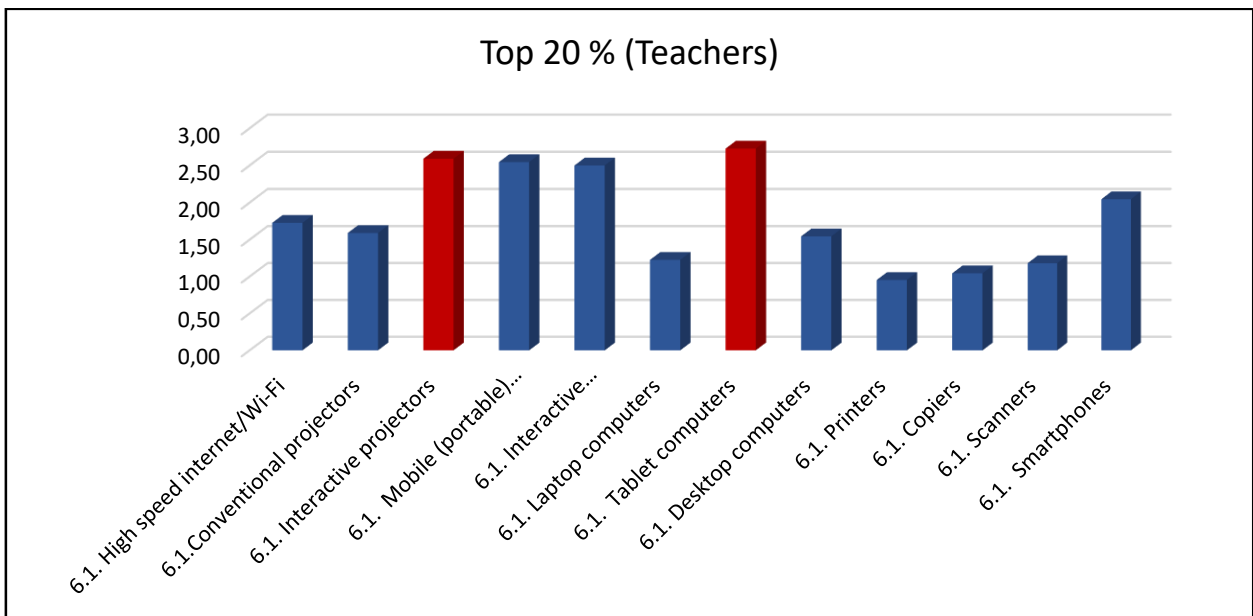


Figure 6.4

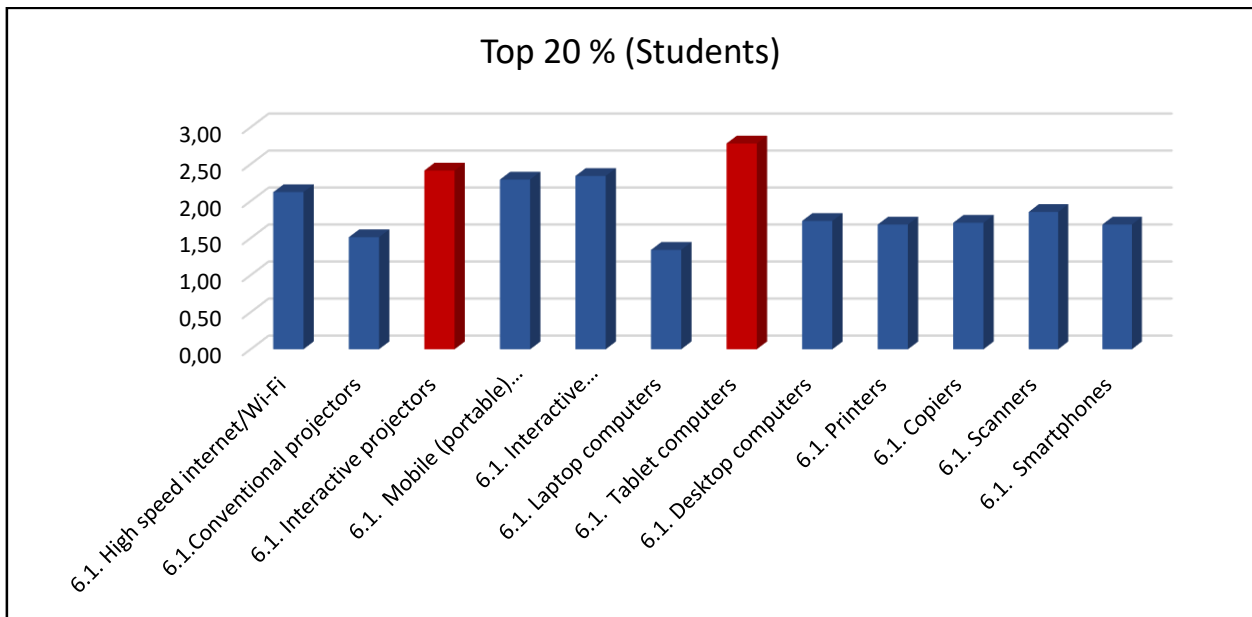


Figure 6.5

Even though the teachers and students were given explanation on all facilities in Georgian and had a variety of options in the list, the opinions of the teaching staff and the students on the most sought-after facilities were almost the same, Fig. 6.4 and 6.5. The top 20% of teaching staff and students both gave priority to the “Interactive projectors” and “tablet computers”.

Section 7. Teaching and learning materials

This section analyzes the opinion of the teaching staff and students of TESAU regarding the educational T/L materials currently used and their effectiveness. The teaching staff in TESAU mainly used Text books, E-books, Presentations (narrated), Presentations (PP, Prezi, etc.), and Course/lecture notes. However, to the greatest extent the teaching staff prioritizes the use of the following teaching materials: Text books, E-books, Video presentations, Video Lectures, Open Educational Resources, Instructor recorded videos & lectures and Presentations (PP, Prezi, etc.), Fig. 7.1.

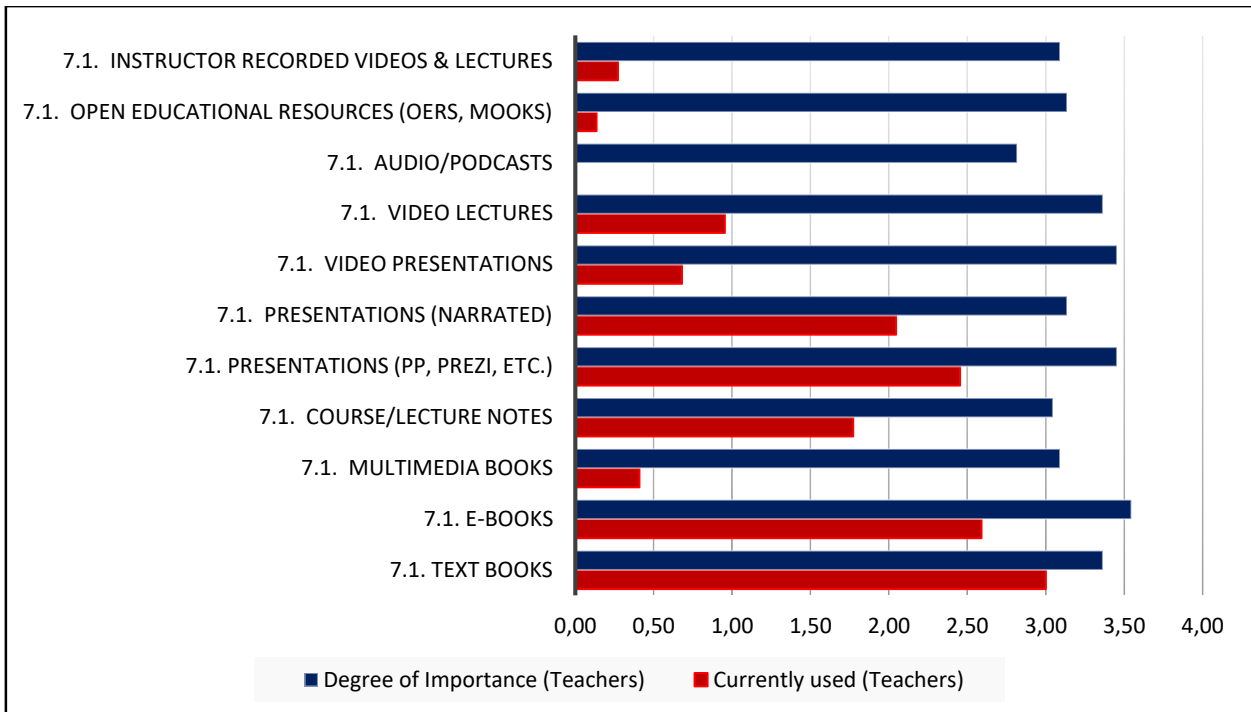


Figure 7.1

The students gave the same responses as teaching staff about currently used learning materials. They distinguished *Text books*, *E-books*, *Presentations (narrated)*, *Presentations (PP, Prezi, etc.)*, and *Course/lecture notes*. Students' preferences regarding effective learning materials coincided with teaching staff's list.

And in this case, the survey results of both groups show a certain consensus of responses, which is reflected by almost identical forms of the curves in the radar Figure 7.3.

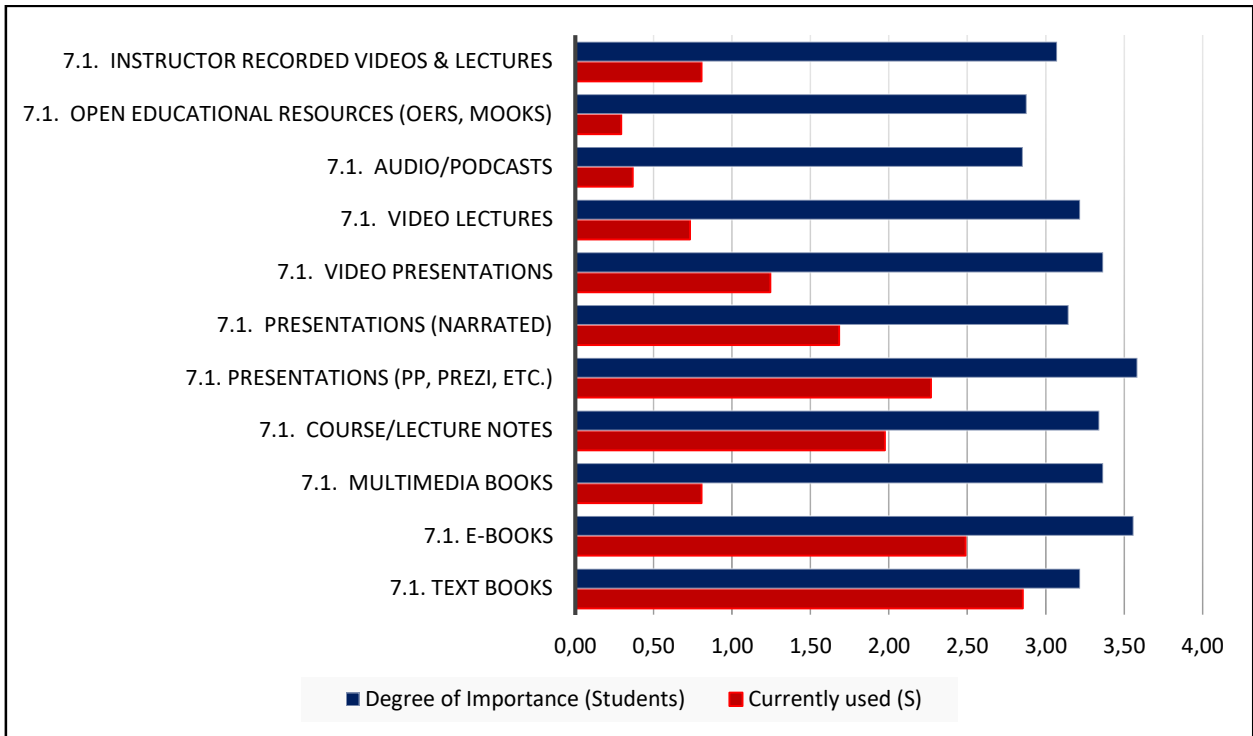


Figure 7.2

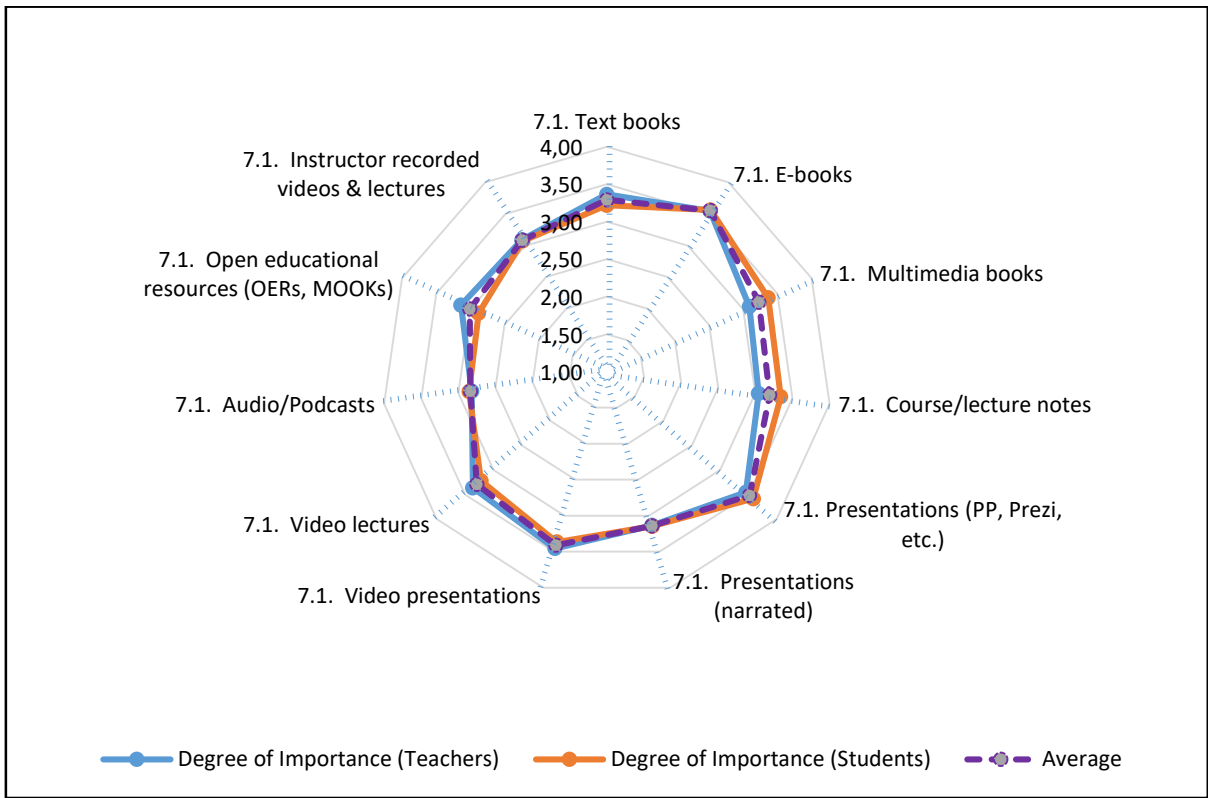


Figure 7.3

In the top 20% of the most needed options, the teaching staff indicates Audio/Podcasts, Open educational resources, Instructor recorded lectures. For students the most significant learning materials are multimedia tools and Open educational resources which is the same as teachers' preference.

So, the results revealed the extensive use of the "Presentations (PP, Prezi, etc.)", "Text books" and "E-books, Course / lecture notes" options.

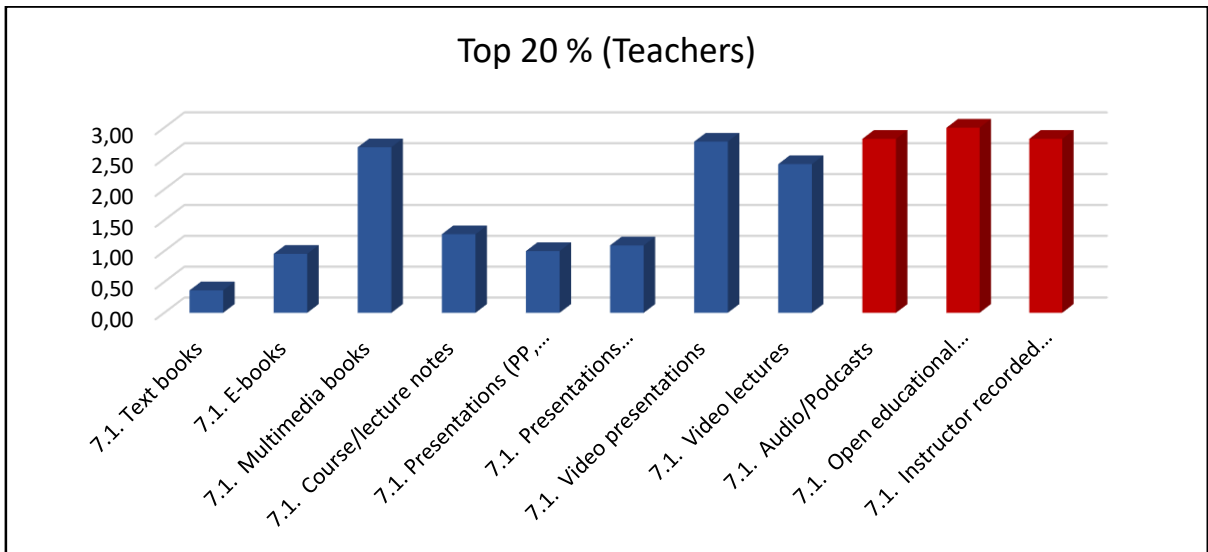


Figure 7.4

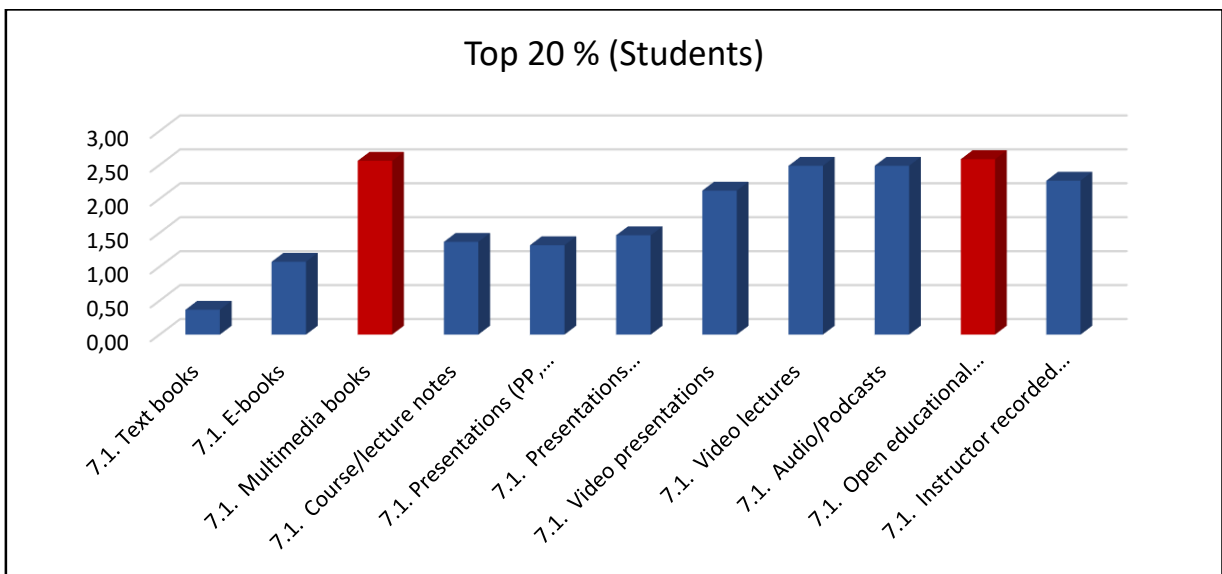


Figure 7.5

The comparison of the results of the surveyed groups on teaching and learning materials reveals an extreme interest in the use of modern content, in particular in audio/video materials and presentations.

Section 8. Additional information given by teachers and students

The students left general comments related to teaching methods:

- Motivated lecturer helps everyone to develop out knowledge also I think that video presentations are a good way for my peers to listen and study easy.
- New methods are needed to improve studying system at the University.

Teaching staff presented their subject-related concerns

- I teach at the faculty of agrarian sciences and we need the methods to teach in laboratories and relevant equipment.
- I guess more interaction between colleagues and exchanging and sharing our teaching experience would do much good to teaching process.
- I think students will need Google glasses

Conclusions and recommendations

The results of the study showed that teaching and learning approaches in TESAU are still conventional and relevant to the existing technology in the educational institution. One of the positive findings of the study is that both teaching staff and students would like to experience new methods, new facilities and assessment forms; this clearly indicates the readiness and openness of the parties to improve the quality of educational experience and follow and incorporate the global new trends in Higher Education.

Based on the results of the surveys some conclusions and recommendations were elaborated:

1. Innovative and technology-enhanced teaching and learning methods/approaches, which need to be introduced in your university.

- Experienced based learning
- E-teaching/Web and Multimedia enhanced teaching
- Research based learning
- Flipped classroom
- Game simulation/role –play
- focus group teaching
- Doing a project
- Watching videos related to course content
- Engaging in logic games and brainteasers
- internships/field training
- listening to audio recorded lectures

2. Facilities supporting teaching and learning, which need to be introduced in your university.

- Communities of E-learners
- Interactive whiteboards/smartboards
- Digital games and simulations
- E-portfolios

3. New form of teaching and learning materials, which need to be introduced in your university.

- Audio/Podcasts
- Open educational resources

- Instructor recorded lectures
- Multimedia tools

To come to final common conclusions on the existing needs and to develop common principles for achieving the main objectives of PRINTeL project a comparative analysis of the similarly processed results of the Consortium member universities' surveys is required.