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

**YEREVAN STATE UNIVERSITY (YSU)**

**NEEDS ANALYSIS REPORT**

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

**YEREVAN 2018**

## **CONTENTS**

Introduction.....	3
Section 1. General Information.....	5
Section 2. Teaching Styles and Pedagogical Approaches .....	9
Section 3. Learning Styles and Approaches .....	14
Section 4. Assessment Methods and Approaches.....	19
Section 5. Use of Technology, E-teaching/Learning and Social Media for Teaching and Support of Learning.....	23
Section 6. Facilities to Support Teaching and Learning.....	28
Section 7. Teaching and Learning Materials.....	32
Section 8. Additional Information Given by Teachers and Students.....	37
Conclusions and Recommendations .....	38

## Introduction

For the purpose of realization of Activity 1.2 need development of Need Analysis Report of the “PRINTeL” project two questionnaires -“*Teaching staff professional development needs assessment*” and “*Student learning needs assessment*” - were composed. The purposes of the questionnaires consisted in the collection of corresponding information concerning teaching and learning methods applied in YSU and their support with technological means, and in the exploration of teachers and learners’ needs for innovative methods and technological means in the fields of application.

The aim of the online survey forms is to introduce innovative and technology enhanced learning and teaching methods in YSU, as well as state-of-art facilities and technological tools.

Each of the questionnaires included eight sections.

“*Teaching staff professional development needs assessment*” questionnaire consisted of the following sections:

- Section 1. General information,
- Section 2. Teaching styles and pedagogical approaches used in class,
- Section 3. Learning styles and approaches,
- Section 4. Assessment methods and approaches,
- Section 5. Use of technology, e-teaching & social media for teaching and support of learning,
- Section 6. Facilities to support teaching,
- Section 7. Teaching materials,
- Section 8. Teachers’ comments and recommendations.

The sections included in “*Student learning needs assessment*” questionnaire were:

- Section 1. General information,
- Section 2. Teaching styles and approaches in class,
- Section 3. Learning styles and approaches,
- Section 4. Assessment methods and approaches,

- Section 5. Use of technology, e-learning & social media for supporting learning,
- Section 6. Facilities to support student learning,
- Section 7. Learning materials,
- Section 8. Students' comments and recommendations.

The questionnaires were created with the help of Google forms, that enabled the online conduction of the Polls. On the 26-27<sup>th</sup> of April, 2018, the online questionnaires were delivered to YSU teachers and students for the aim of obtaining their feedback. The reception of responses was ceased on the 18<sup>th</sup> of May, 2018. The results were worked out on the 21-25<sup>th</sup> of May, 2018.

The methodology of analyzing the data obtained from Sections 2-7 is described below:

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 reduced 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.

Table of Interpretation of Survey Questions in Scores:

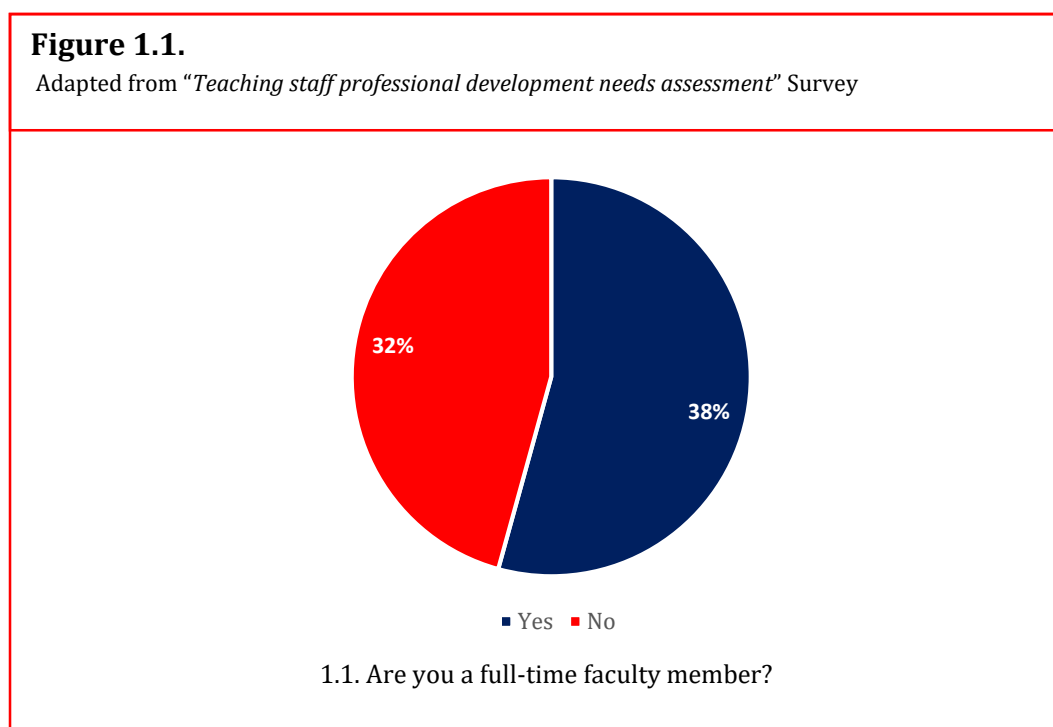
1.	<i>High need or Highly effective</i>	4
2.	<i>Medium need or Partially effective</i>	3
3.	<i>Low need or Less effective</i>	2
4.	<i>No need or Not effective</i>	0
5.	<i>Currently Used</i>	3

The quantitative and qualitative analysis of the worked out data is represented in the present report.

The questionnaires are attached to the present report.

## Section 1. General Information

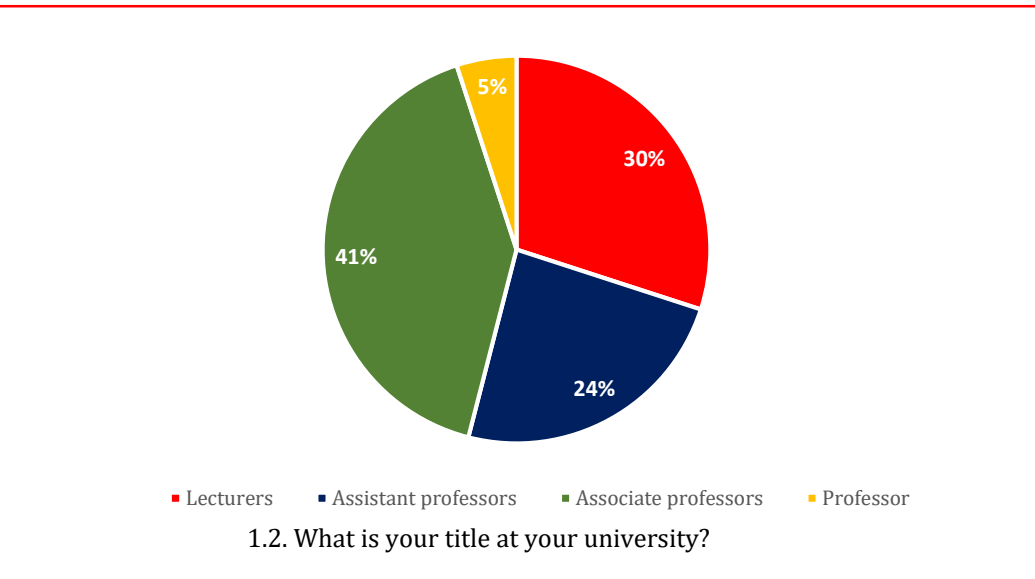
The online questionnaires have been sent to around 860 teachers and about 15000 students of YSU. 192 teachers and 264 students completed the online survey forms. 62% of the participating teachers works on full-time and 38% - on part-time basis (Figure 1.1).



The 30% of the teachers who completed the questionnaire are lecturers, 24% - assistant professors, 41% - associate professors and 5% - professors (Figure 1.2).

**Figure 1.2.**

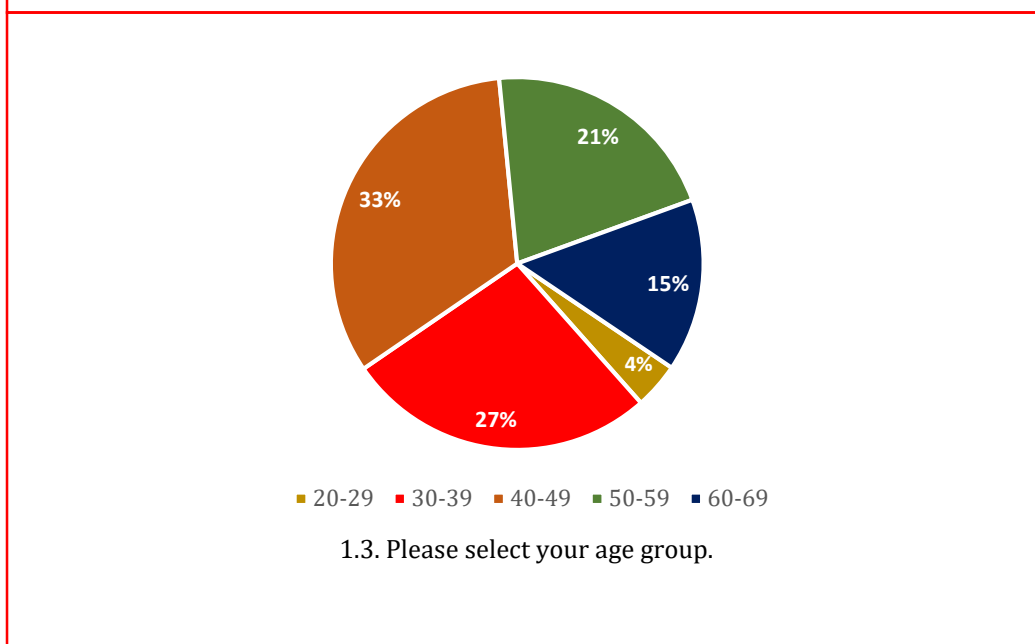
Adapted from "Teaching staff professional development needs assessment" Survey



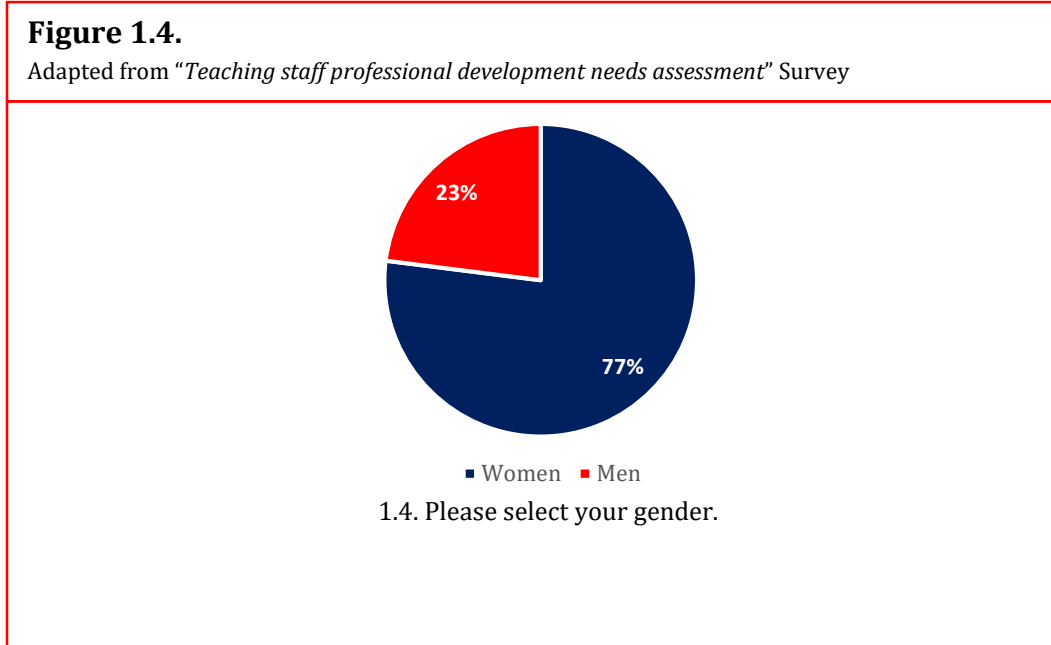
The 27% of the respondent teachers belongs to 30-39, 33% - to 40-49, 21% - to 50-59 age groups and 15% of them belong to over 60 years age group. Only 4% of the respondent teachers belong to the age category under 29 years (Figure 1.3).

**Figure 1.3.**

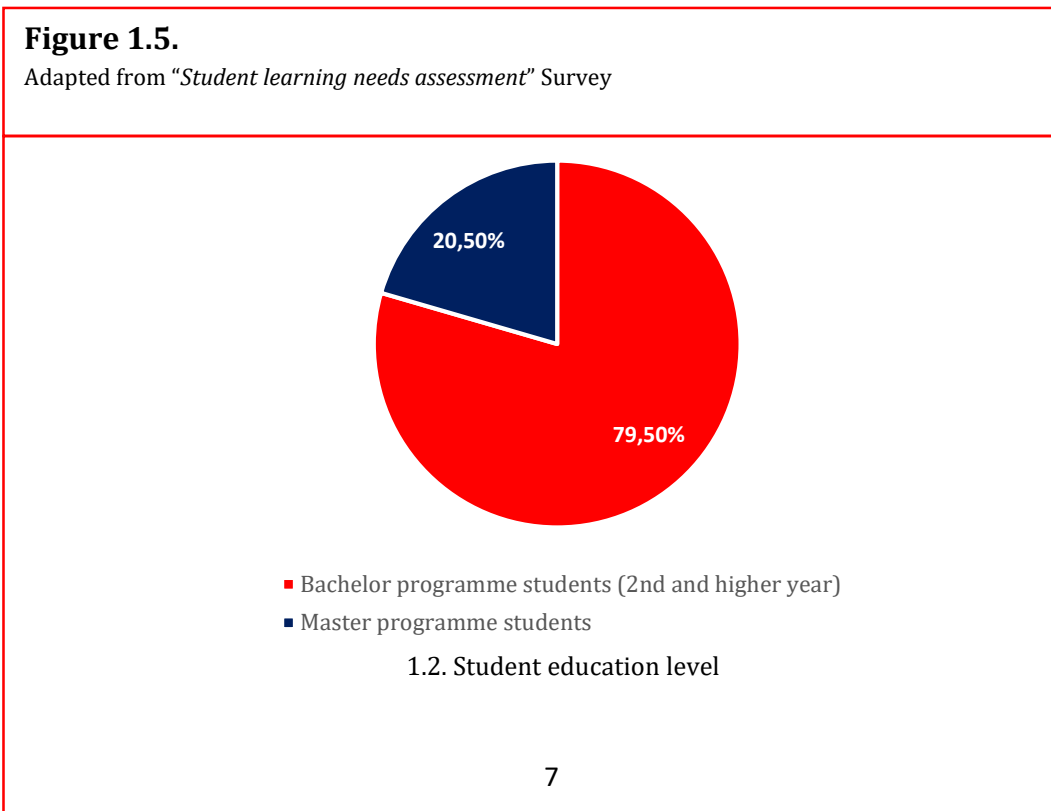
Adapted from "Teaching staff professional development needs assessment" Survey



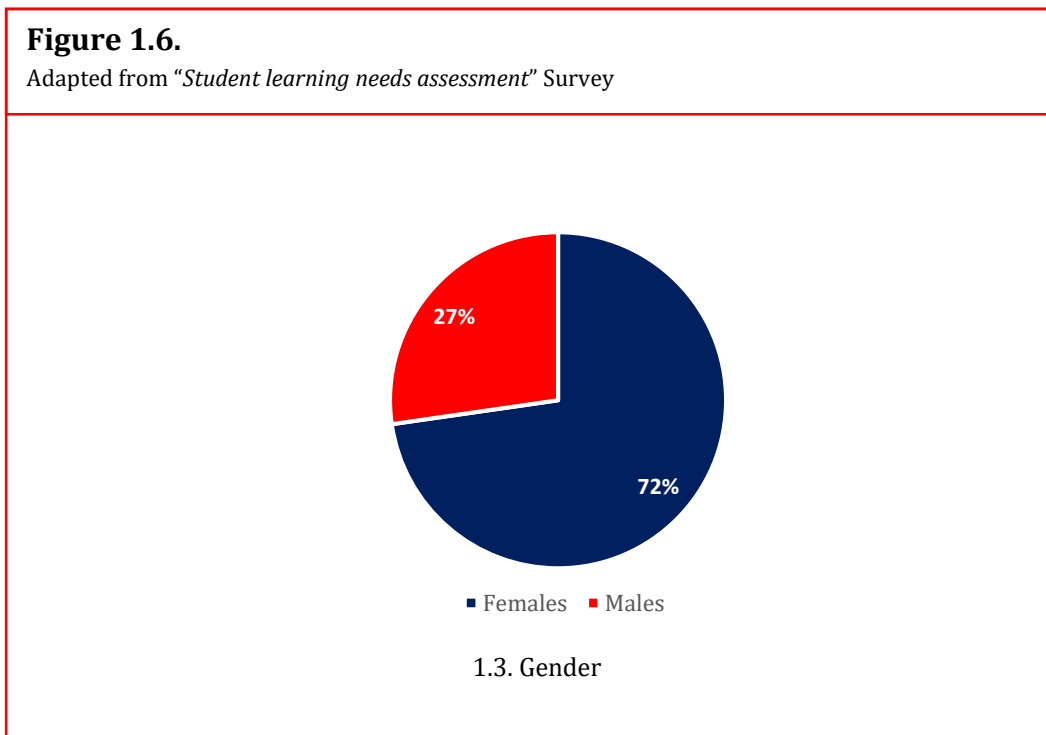
The percentage of the women who completed the online questionnaire comprised 77 % and the one of men – 23% (Figure 1.4).



The 79,5% of the respondent students is enrolled for bachelor's degree programmes and 20,5% - for master's degree porgrammes (Figure 1.5).



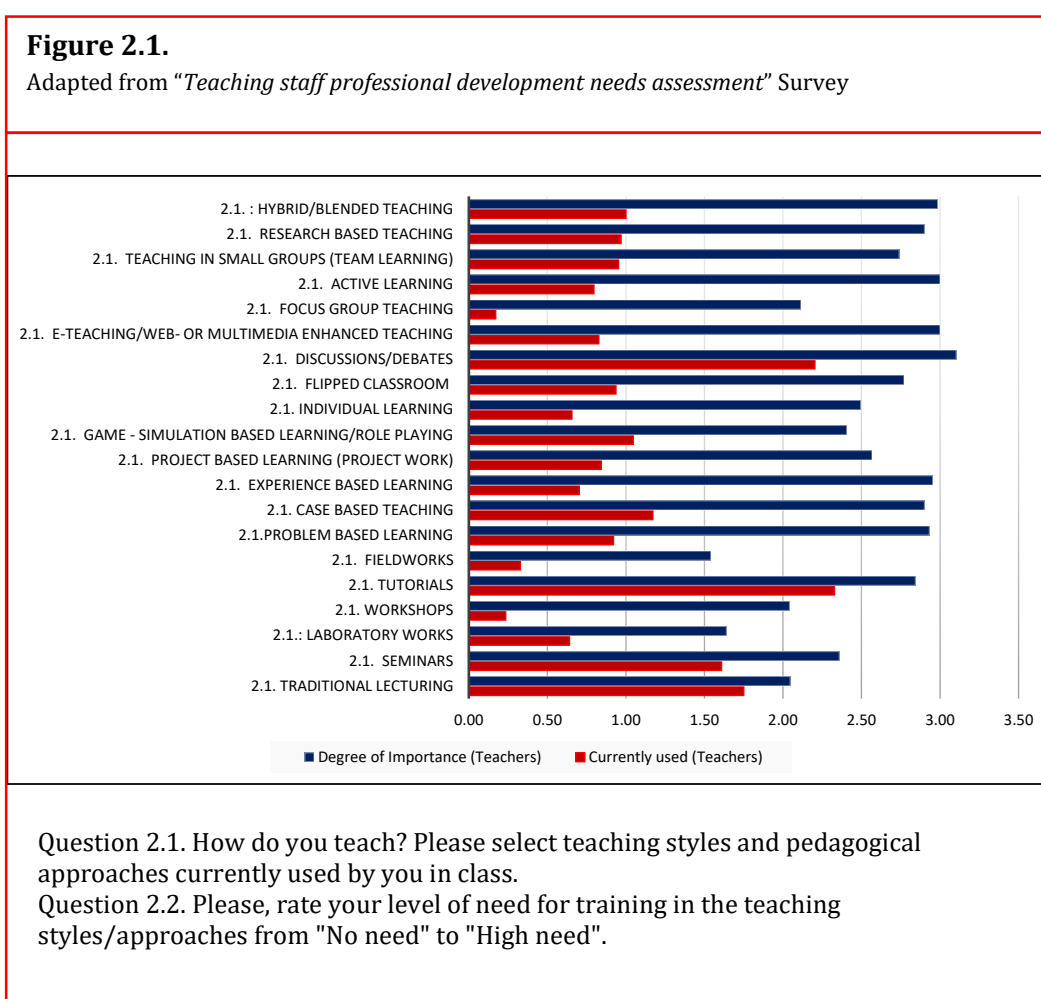
The 72% of the respondent students are females and 27% - males (Figure 1.6).





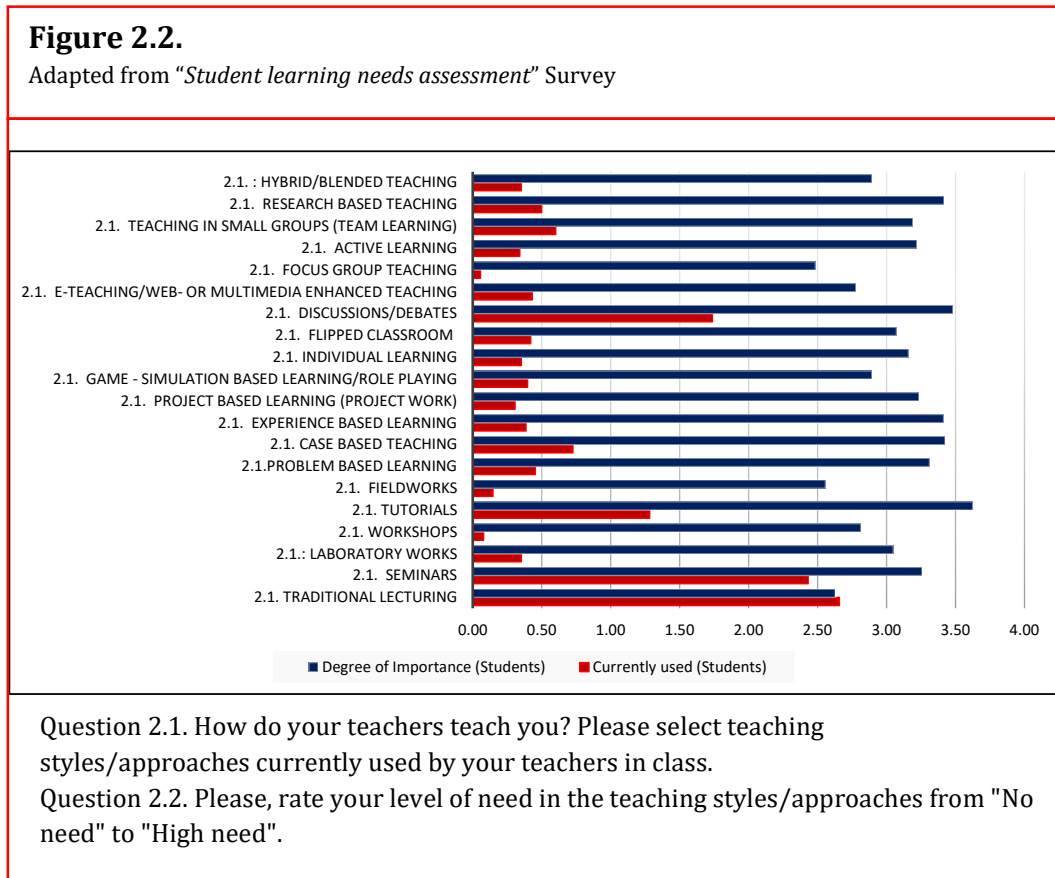
## Section 2. Teaching Styles and Pedagogical Approaches

According to the results of the survey designed for teachers at present such teaching styles and pedagogical approaches as *Traditional lecturing, Seminars, Discussions/debates, E-teaching/Web- or Multimedia enhanced teaching, Active teaching, Teaching in small groups (team learning), Research based teaching and Hybrid/blended teaching* are the most popular in YSU (Figure 2.1).

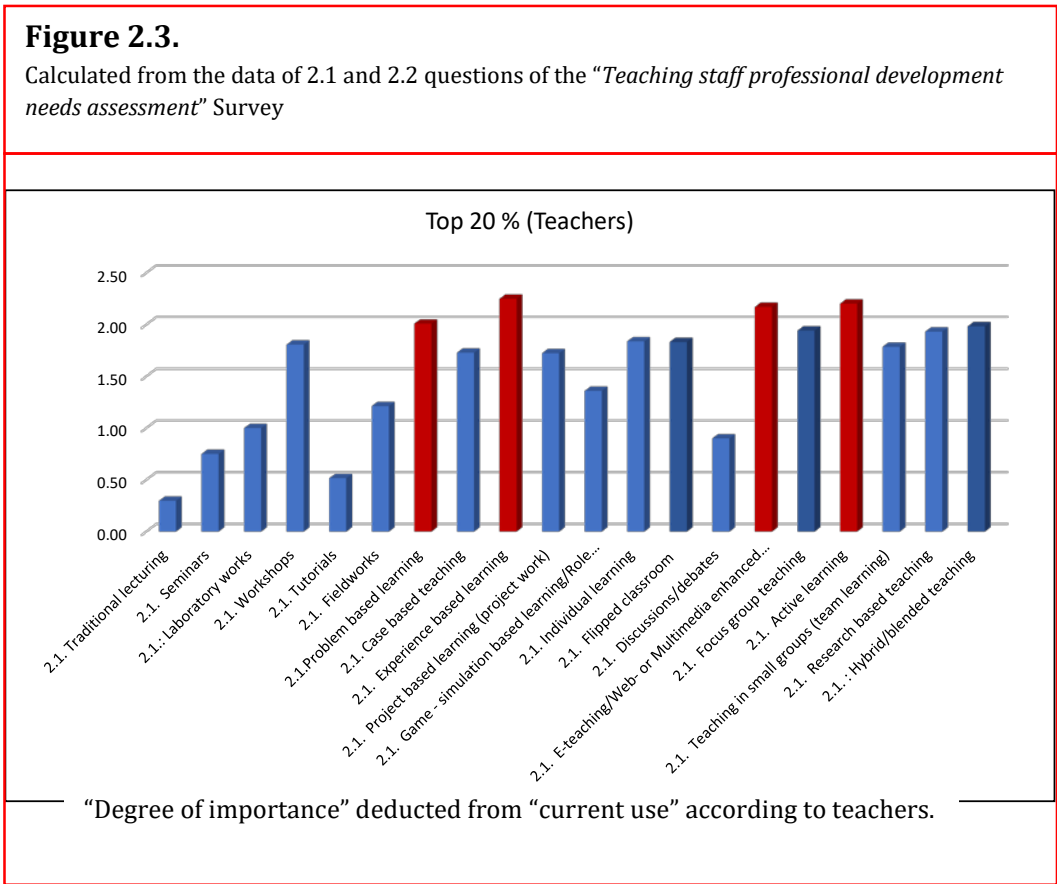


At the same time the students have also marked out *Traditional lecturing, Seminars, Tutorials, Discussions/debates* as the most popular teaching forms in YSU. The respondent students have marked *Seminars, Tutorials, Problem based learning, Case based teaching, Experience based learning, Project based learning (project work), Discussions/debates, Active*

learning, Teaching in small groups (team learning), Research based teaching as the most desirable teaching forms for them (Figure 2.2).



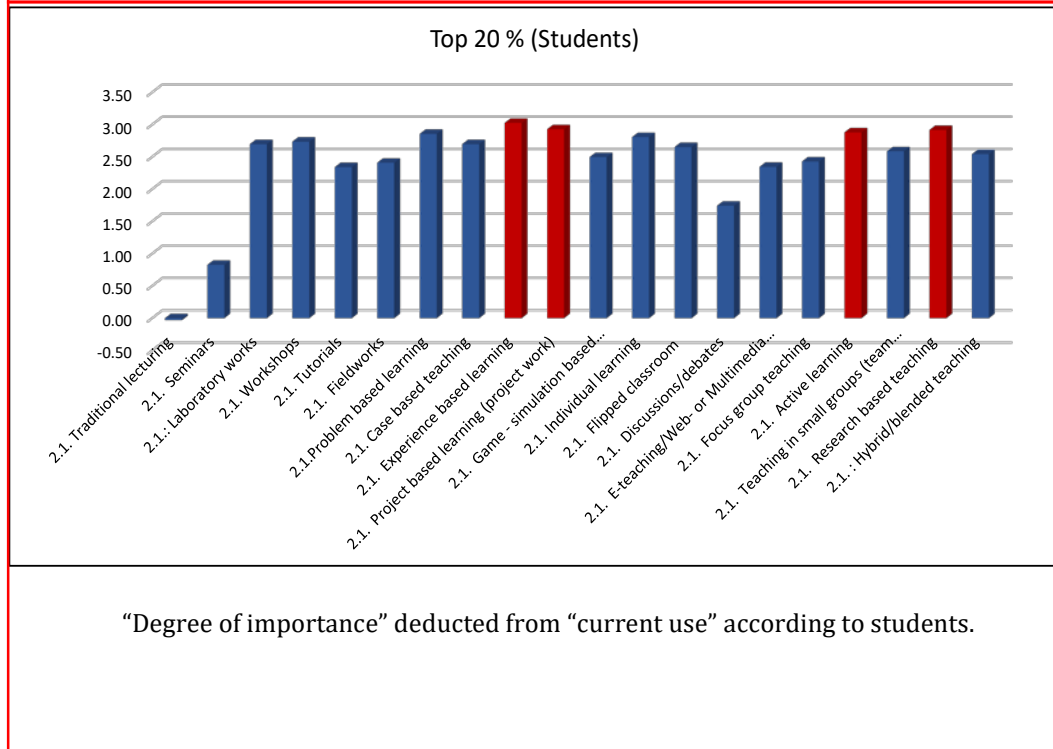
If we take into consideration the fact that some part of the desirable teaching forms is already used to some extent in YSU then according to teachers the most desirable teaching forms in YSU are: *Problem based learning, Experience based learning, E-teaching/Web- or Multimedia enhanced teaching and Active learning, Flipped classroom Hybrid/blended teaching* (Figure 2.3).



Analogically, taken the fact that according to students’ feedback some of the desirable teaching forms are already implemented in YSU, then according to the respondent students’ opinions the most desirable (important) forms of teaching in YSU are: *Experience based learning, Project based learning (project work), Active learning, Research based teaching, Flipped classroom, Hybrid/blended teaching* (Figure 2.4)

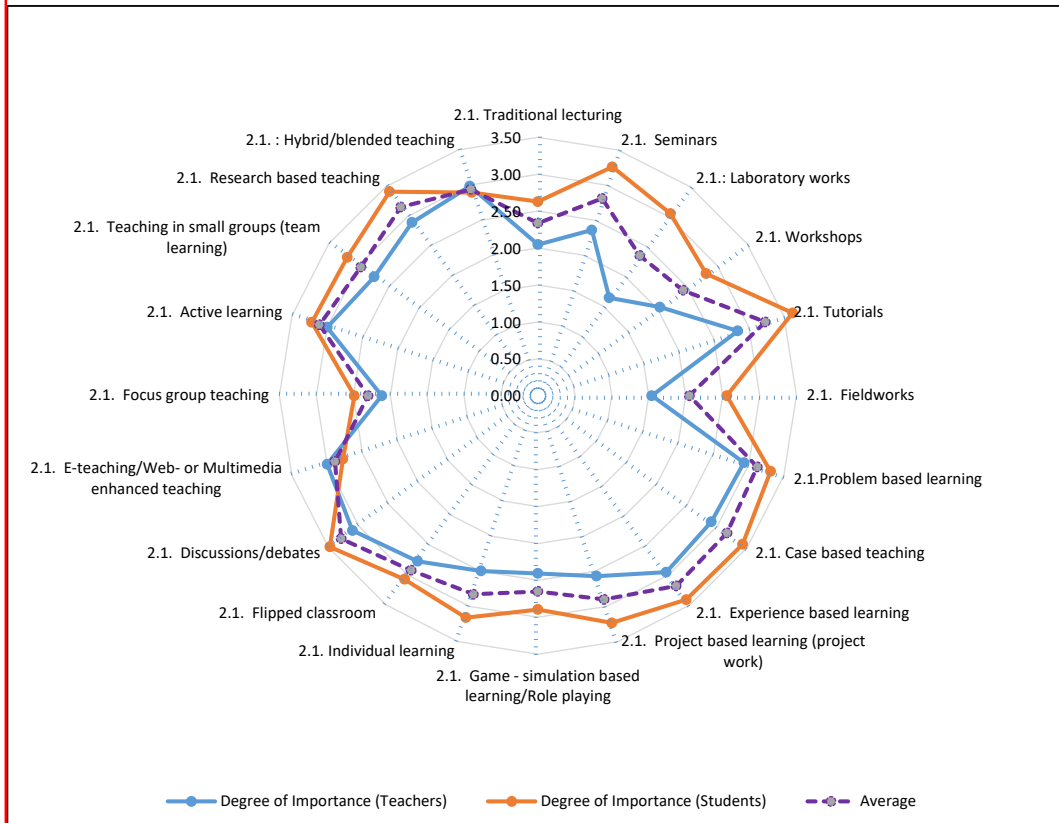
**Figure 2.4.**

Calculated from the data of 2.1 and 2.2 questions of the “*Student learning needs assessment*” Survey



As we can see in Figure 2.5 teachers and students’ several opinions about the importance of the forms of teaching coincide. However, the teachers and students’ opinions relating to the estimation of the degree of importance of some separate teaching forms differ, as for example, in *Research based teaching, Seminars, Laboratory works, field works* and many others (Figure 2.5).

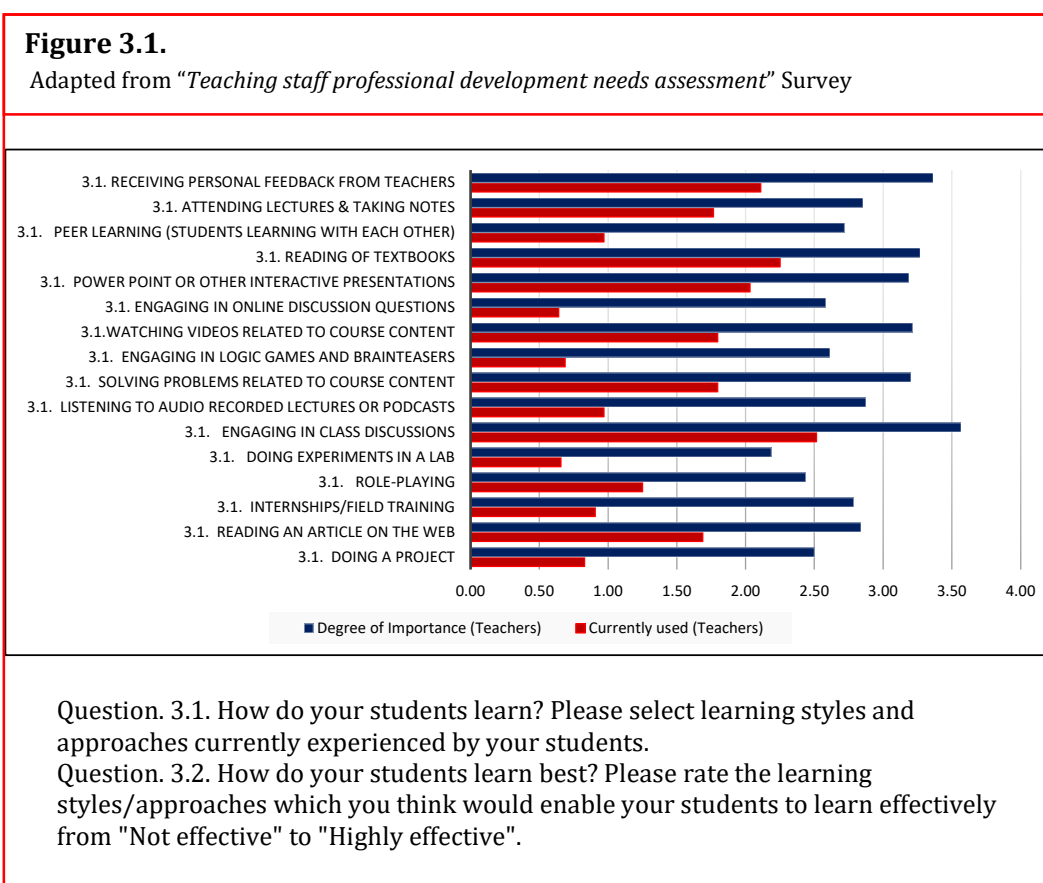
**Figure 2.5.**  
Adapted from figures 2.3 and 2.4



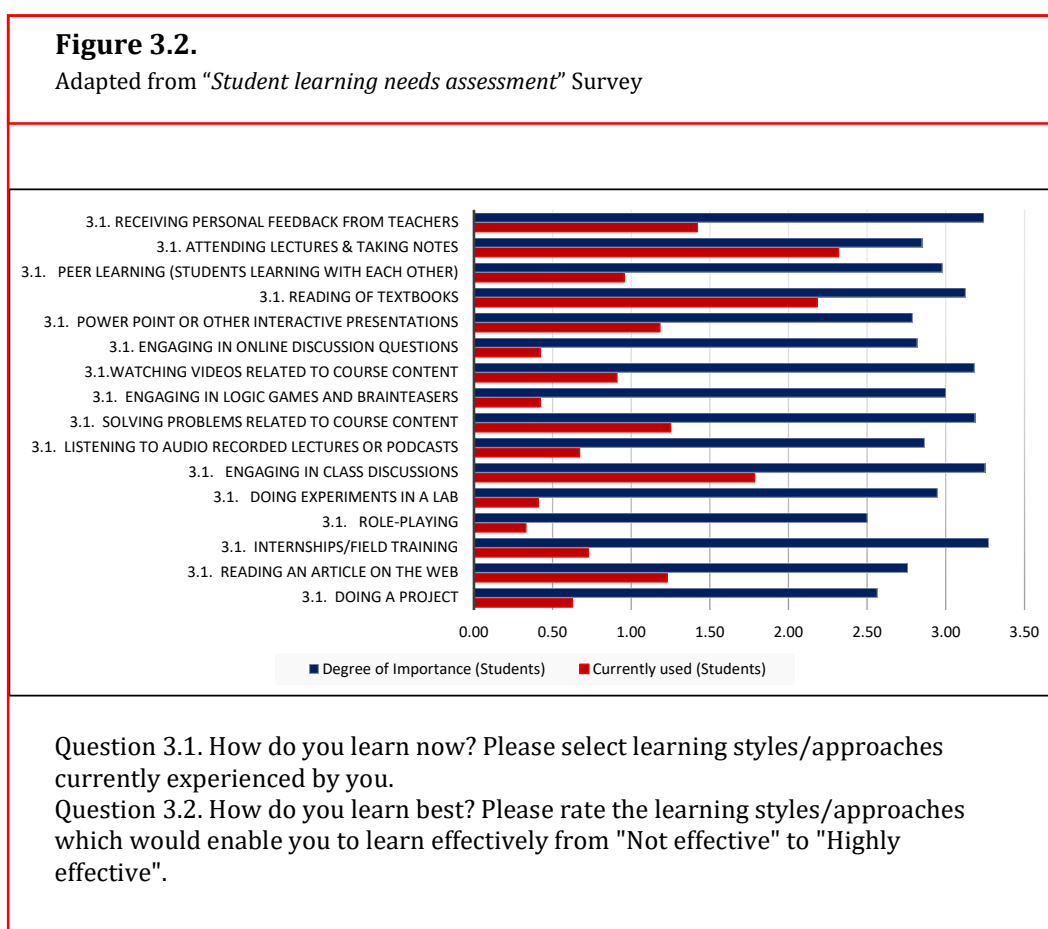
Degree of importance of the teaching styles and approaches according to teachers and students' feedback

### Section 3. Learning Styles and Approaches

According to the opinions of the teachers who participated in the Survey, at present in YSU the most popular forms of students' learning are: *Attending lectures & taking notes, Reading of textbooks, Engaging in class discussions, Receiving personal feedback from teachers*. At the same time the teachers consider that the most effective forms of learning for students are: *Engaging in class discussions, Receiving personal feedback from teachers, Solving problems related to course content, Watching videos related to course content, Power Point or other interactive presentations and Reading of textbooks* (Figure 3.1).

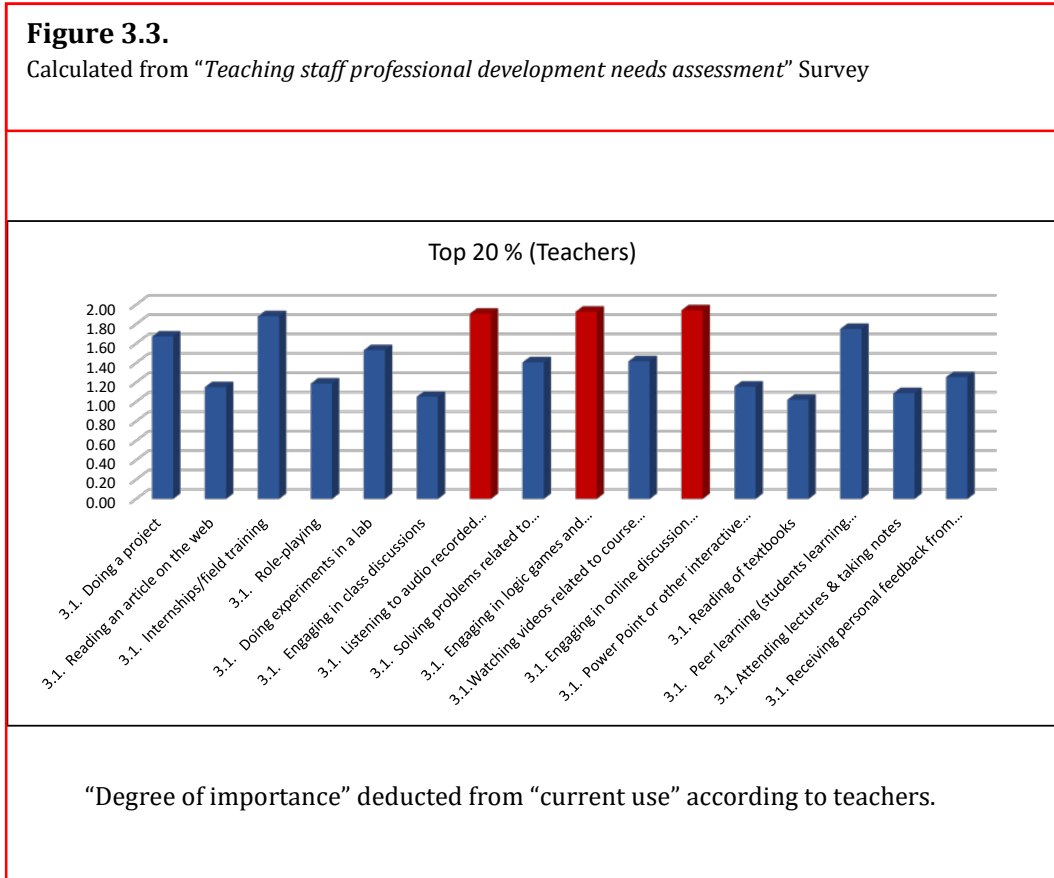


According to the feedback received from the respondent students the most popular learning forms in YSU are: *Attending lectures & taking notes, Reading of textbooks, Engaging in class discussions and Receiving personal feedback from teachers*. This feedback absolutely coincides with the one received from the teachers. From another perspective the students consider that the most effective forms of learning for them are: *Internships/field training Engaging in class discussions, Solving problems related to course content, Watching videos related to course content, Reading of textbooks and Receiving personal feedback from teachers* (Figure 3.2).



Considering the fact that some part of the most effective forms of learning mentioned above is already implemented to some extent in YSU, then according to the teachers' feedback the most desirable forms of learning in YSU are: *Listening to audio recorded*

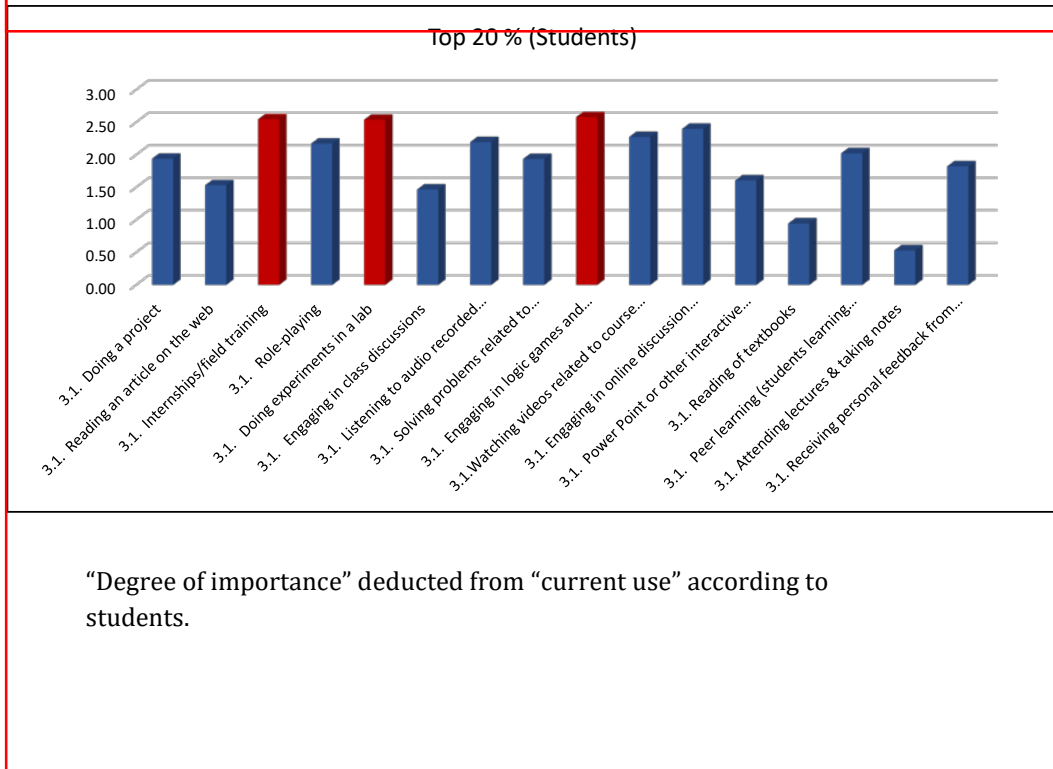
lectures or podcasts, Engaging in logic games and brainteasers and Engaging in online discussion questions (Figure 3.3).



In the same way, according to the students' feedback some part of the learning forms is already used to some extent in YSU, then according to the students' opinions the most desirable (important) forms of learning in YSU are: *Internships/field training, Doing experiments in a lab, Engaging in logic games and brainteasers* (Figure 3.4).



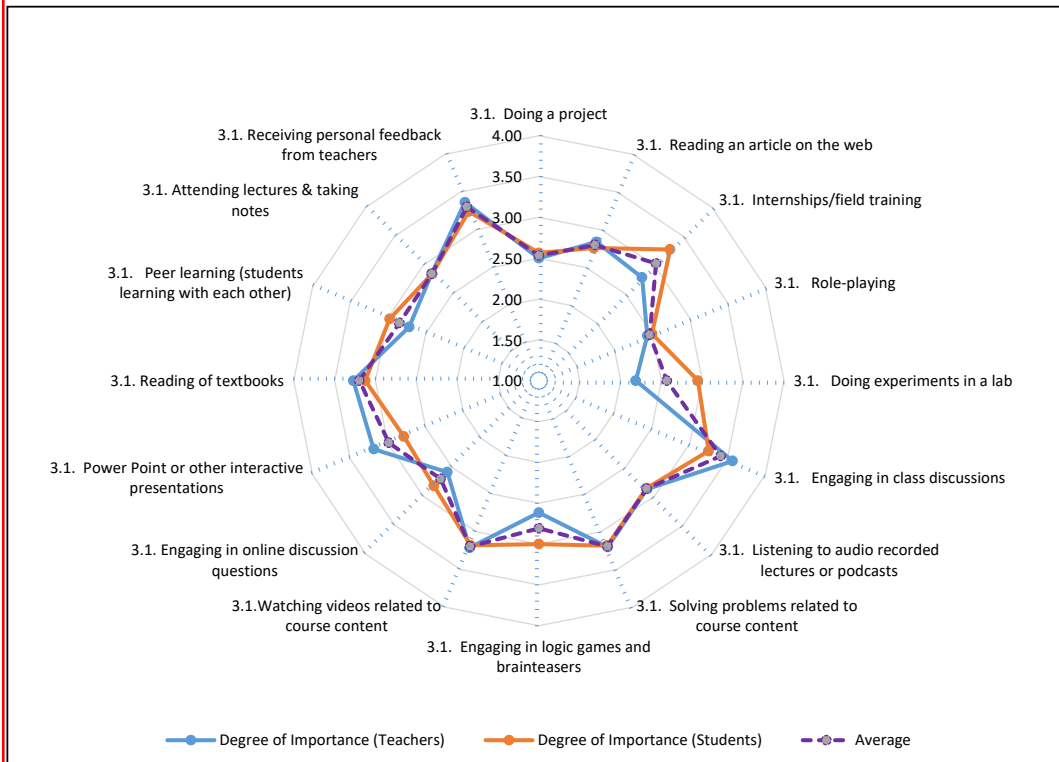
**Figure 3.4.**  
 Calculated from "Student learning needs assessment" Survey



As we can see in Figure 3.5 teachers and students’ several opinions about the importance of the forms of learning coincide. However, the teachers and students’ opinions relating to the estimation of the degree of importance of some separate learning forms differ, as for example, in *Doing experiments in a lab*, *Internships/field training* and *Engaging in logic games and brainteasers* (Figure 3.5).

**Figure 3.5.**

Adapted from figures 3.3 and 3.4



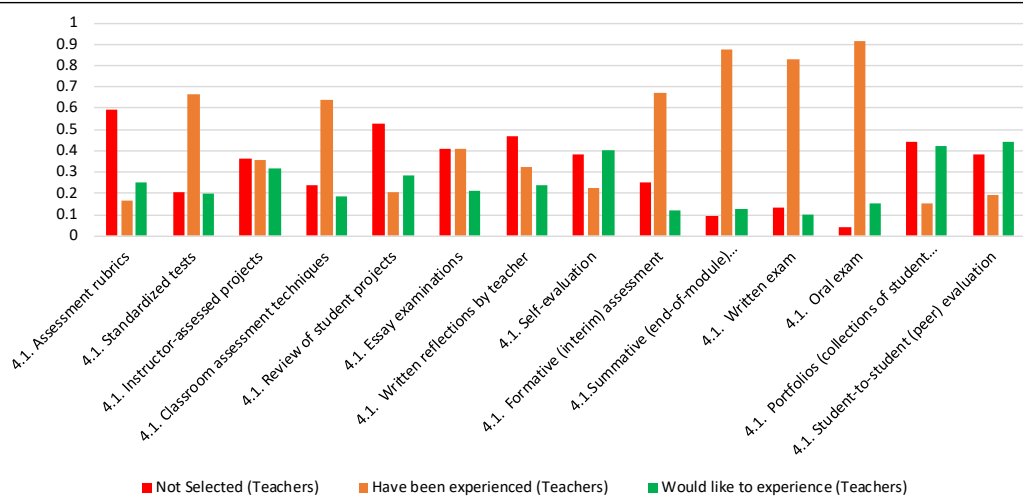
Degree of importance of the learning styles/approaches according to teachers and students' feedback

## Section 4. Assessment Methods and Approaches

According to the responses received from the teachers who participated in the Survey *Summative (end-of-module) assessment* is more popular than *Formative (interim) assessment*, moreover the most widespread assessment forms among them are: *Written and Oral exams, Standardized tests and Classroom assessment techniques*. At the same time the teachers would like to use such assessment methods and forms as *Portfolios (collections of student work), Student-to-student (peer) evaluation, Self-evaluation* and *Instructor-assessed projects* (Figure 4.1).

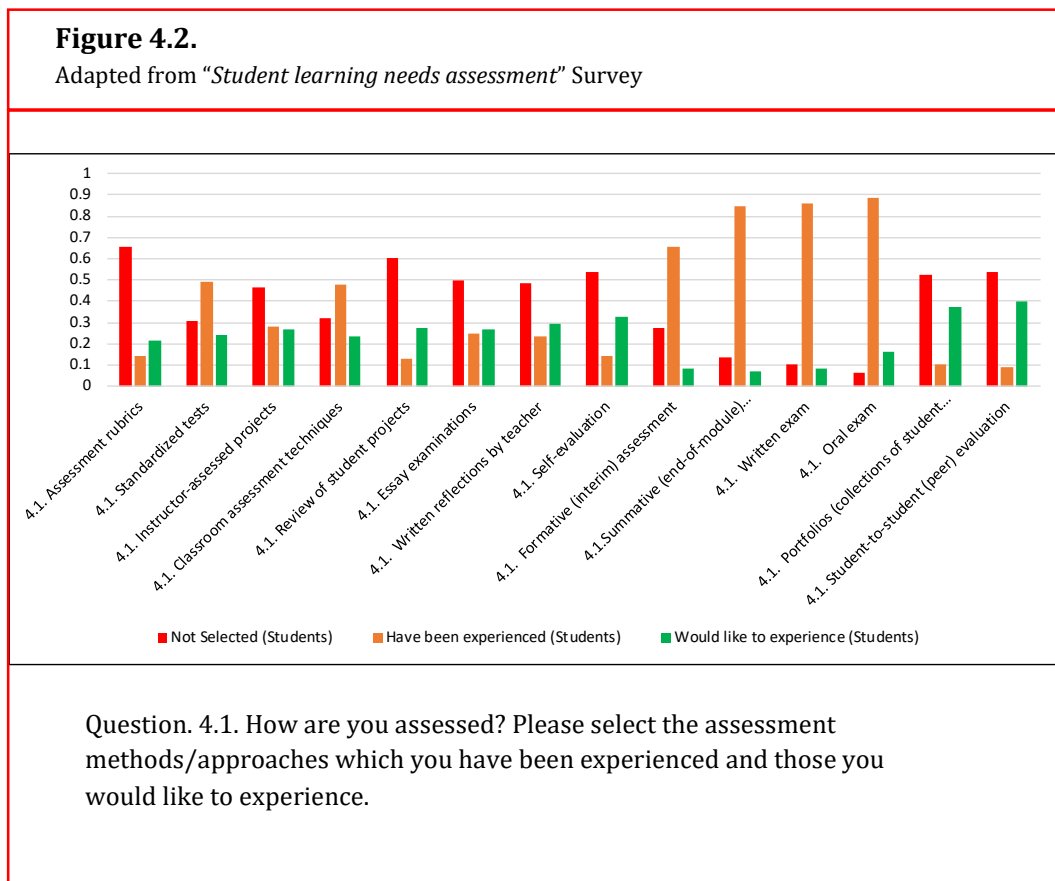
**Figure 4.1.**

Adapted from "Teaching staff professional development needs assessment" Survey



Question. 4.1. How do you assess your students? Please select the assessment methods/approaches which you used and the those you would like to use.

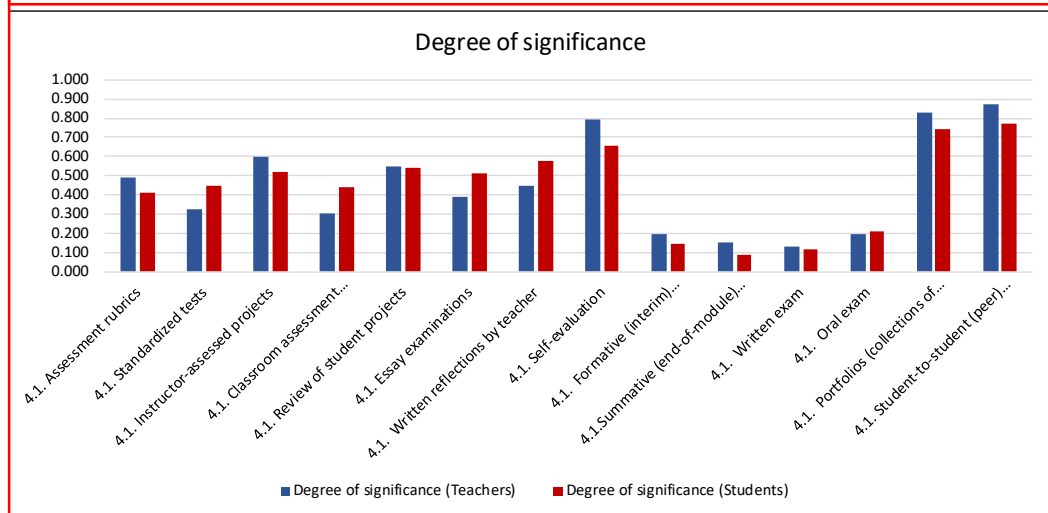
According to the feedback of YSU students *Summative (end-of-module) assessment* is more popular than *Formative (interim) assessment* during which *Written and Oral exams, Standardized tests* and *Classroom assessment techniques* are applied. This feedback absolutely coincides with the one received from the teachers. At the same time the students would like to be assessed with the help of such methods as *Student-to-student (peer) evaluation, Portfolios (collections of student work), Self-evaluation Written reflections by teacher*, etc. (Figure 4.2).



Taken the fact that some of the most desirable assessment forms are used to some extent in YSU, then according to teachers and students’ feedback the most desirable assessment methods in YSU are *Portfolios (collections of student work), Student-to-student (peer) evaluation, Self-evaluation, Instructor-assessed projects, Review of student projects, Written reflections by teacher* and *Assessment rubrics* (Figure 4.3).

**Figure 4.3.**

Calculated from the data of 4.1 questions of the “*Teaching staff professional development needs assessment*” and “*Student learning needs assessment*” Surveys

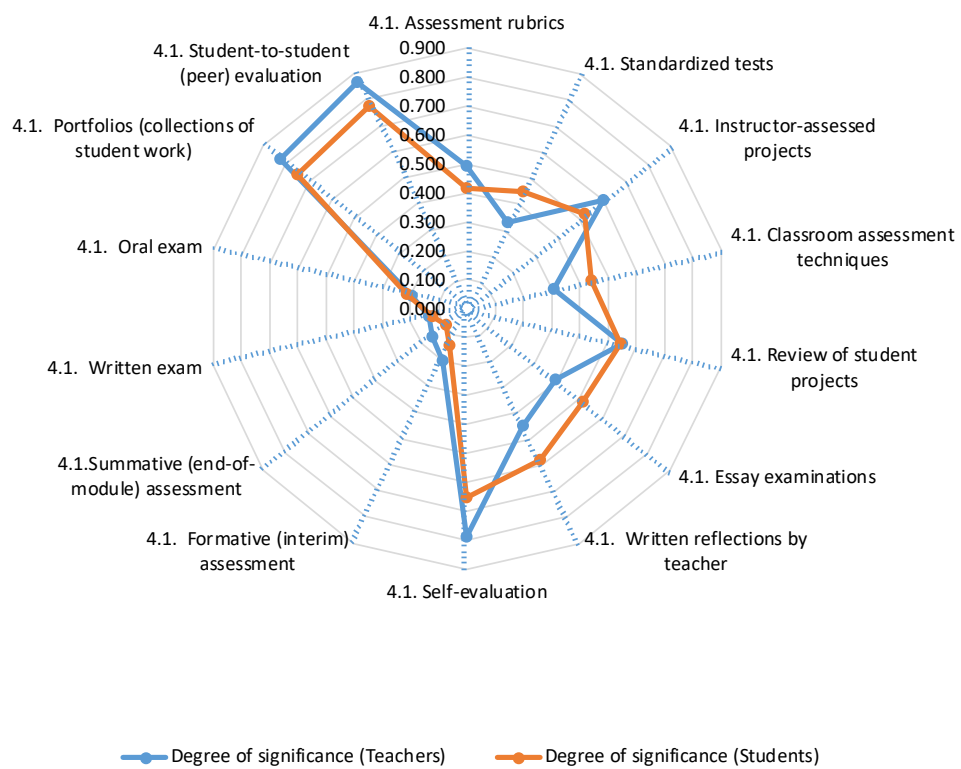


“Degree of importance” deducted from “current use” according to teachers and students.

As we can see from Figure 4.4 the teachers and students’ opinions concerning the evaluation of the most desirable assessment forms qualitatively coincide. It is worth mentioning that the teachers prioritize *Self-evaluation and Instructor-assessed projects, Portfolios (collections of student work), Student-to-student (peer) evaluation* more than students. The latter pay more attention to *Written reflections by teacher, Essay examinations, Classroom assessment techniques and Standardized tests* than the teachers (Figure 4.4).

**Figure 4.4.**

Adapted from figure 4.3



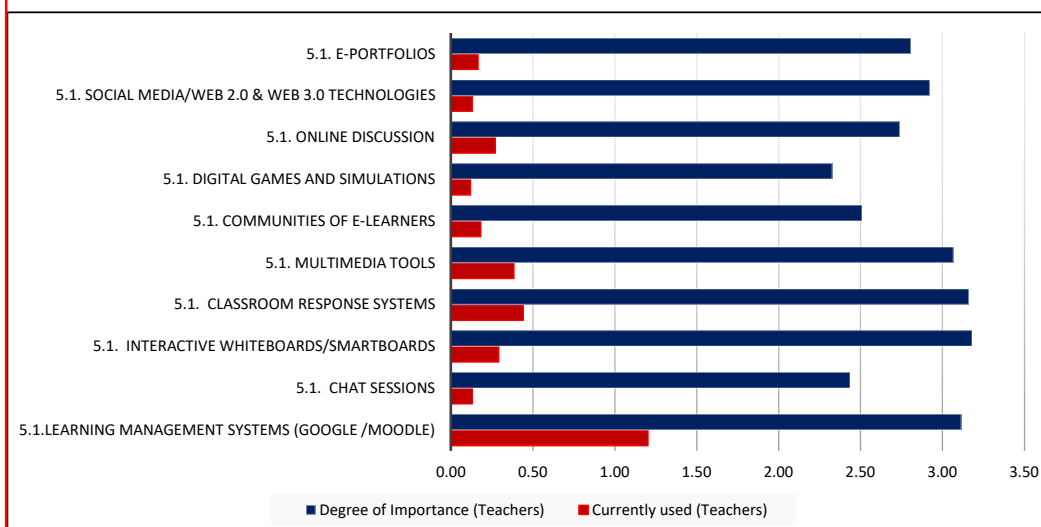
Degree of importance of the assessment methods/approaches according to teachers and students' feedback.

## Section 5. Use of Technology, E-teaching/Learning and Social Media for Teaching and Support of Learning

According to the feedback given by YSU teachers the relatively widespread technology-enhanced teaching and learning approach in YSU is *Learning management systems (Google for education/Microsoft Office 365/Moodle/Blackboard etc.)*. *Multimedia tools and Classroom response systems* are less popular than the one mentioned above. Simultaneously, the teachers find that *Learning management systems (Google for education/Microsoft Office 365/Moodle/Blackboard etc.)*, *Classroom response systems*, *Multimedia tools* and *Social Media/Web 2.0 & Web 3.0* are the most effective technologies supporting teaching process (Figure 5.1).

**Figure 5.1.**

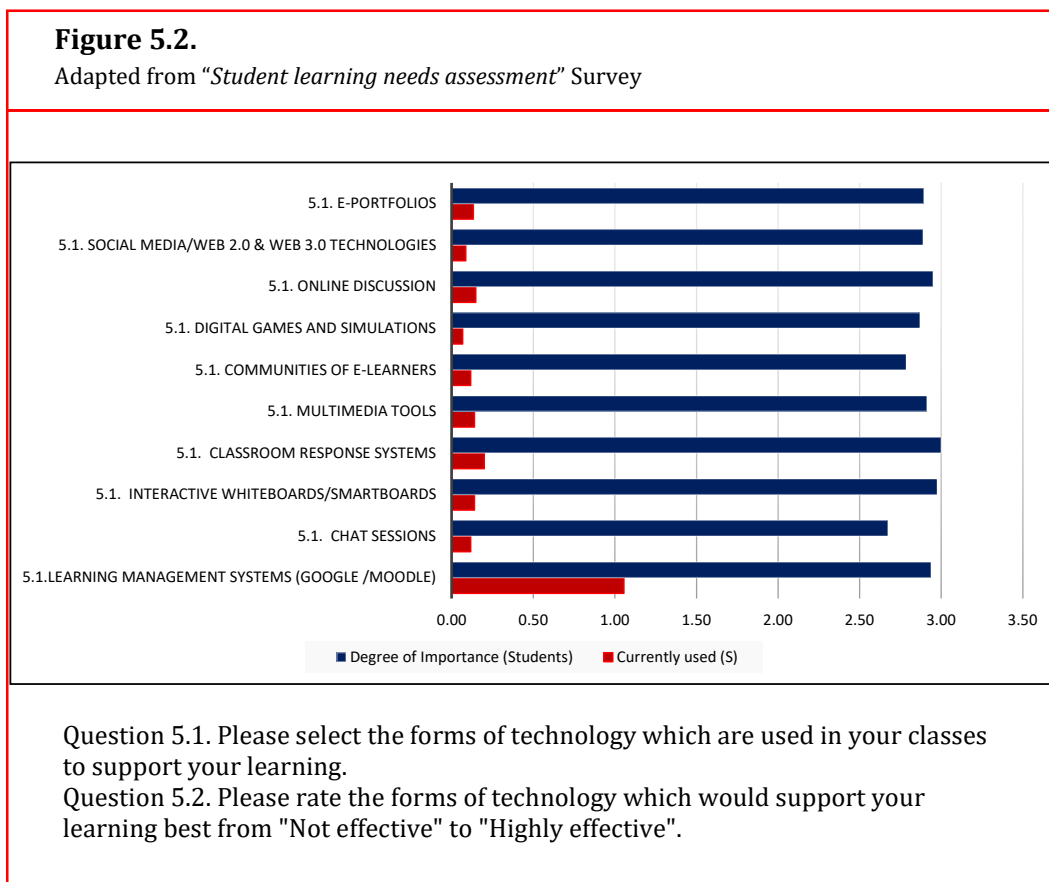
Adapted from "Teaching professional staff needs assessment" Survey



Question 5.1. Please select the forms of technology which you use in your classes to support your teaching.

Question 5.2. Please rate your level of need for training in the technology-enhanced approaches used for teaching and support of learning from "No need" to "High need".

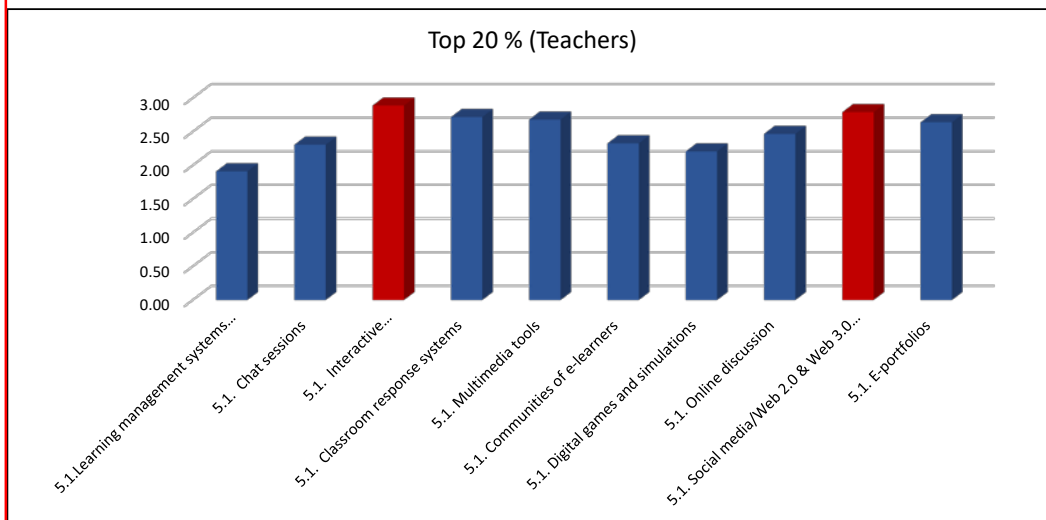
According to the students' feedback the only kind of technologies supporting their learning process is *Learning management systems (Google for education/Microsoft Office 365/Moodle/Blackboard etc.)* that is still less popular in YSU. Interestingly, the students gave almost equal degree of importance to all the supporting technologies represented in the questionnaire (Figure 5.2).



If we consider that some of the most desirable technology-enhanced means mentioned above, though in small quantity, are still exploited in YSU then according to the teachers' feedback the most desirable technology-enhanced teaching means are *Interactive whiteboards/smartboards* and *Social Media/Web 2.0 & Web 3.0 technologies, Classroom response systems, Multimedia tools* and *E-portfolios* (Figure 5.3).



**Figure 5.3.**  
Adapted from “*Teaching professional staff needs assessment*” Survey

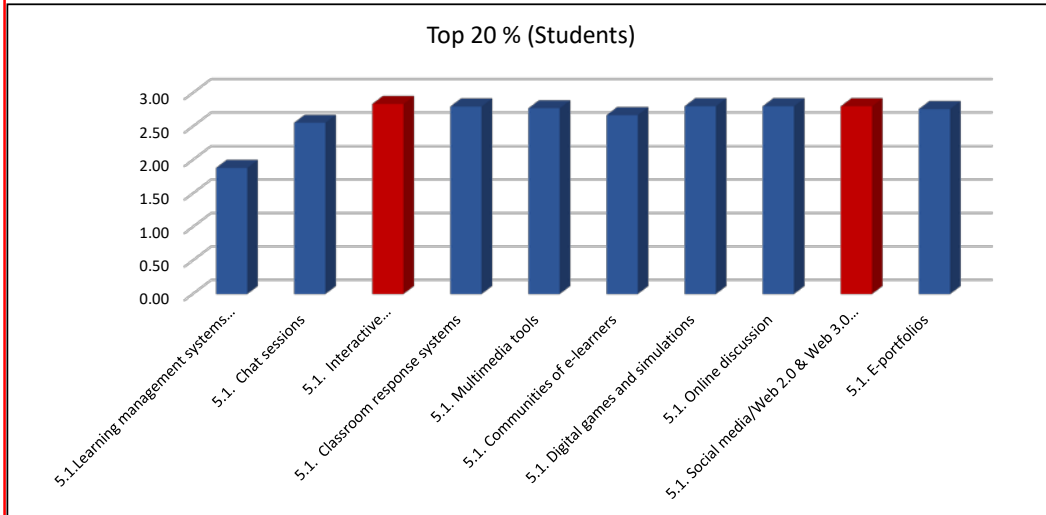


“Degree of importance” deducted from “current use” according to teachers.

If we pay attention the fact that one of the most desirable technology-enhanced learning means is already used in YSU in small scale, then according to students the most desirable technology-enhanced learning means are all the ones listed in the questionnaire except for: *Learning management systems* and *Chat sessions* (Figure 5.4). These results absolutely coincide with the teachers’ feedback (Figure 5.5).

**Figure 5.4.**

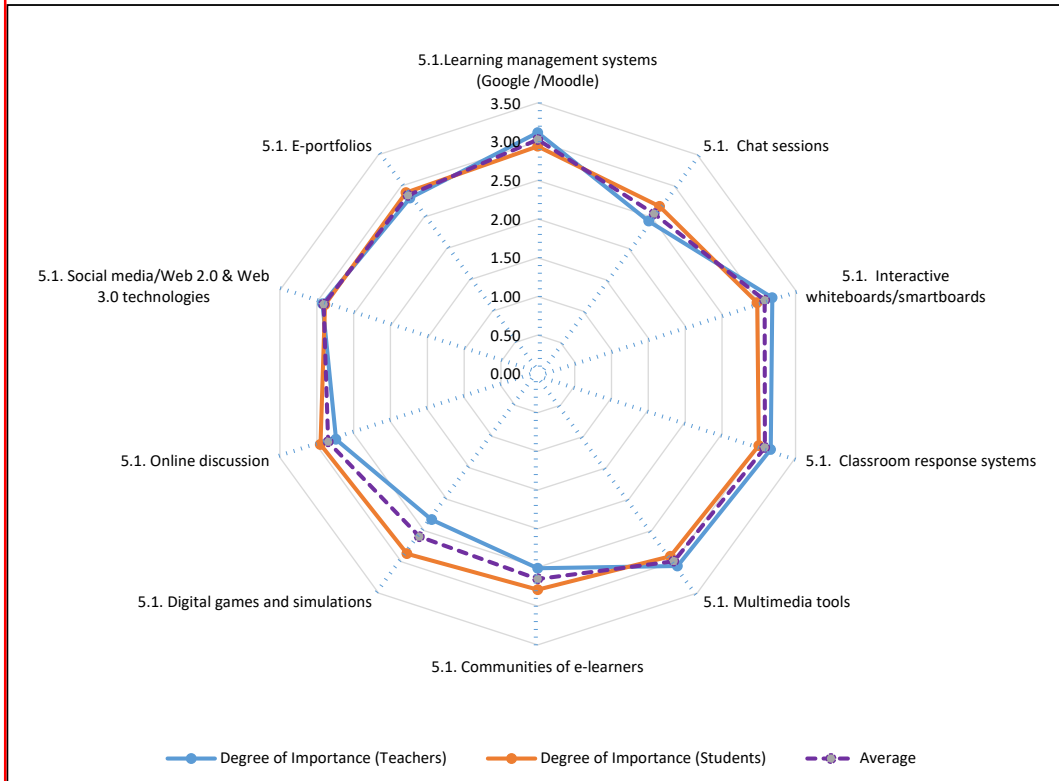
Adapted from “Student learning needs assessment” Survey



“Degree of importance” deducted from “current use” according to students.

**Figure 5.5.**

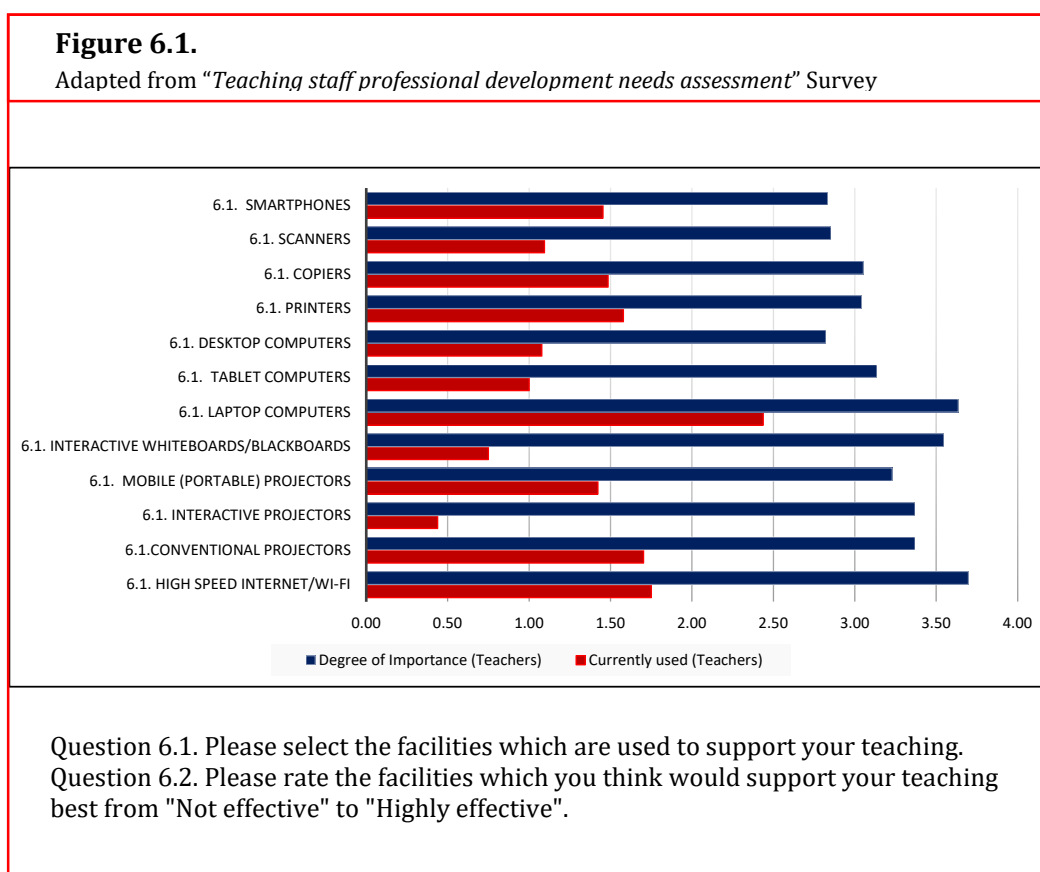
Adapted from “*Teaching staff professional development needs assessment*” and “*Student learning needs*”



Degree of importance of the forms of technology according to teachers and students' feedback

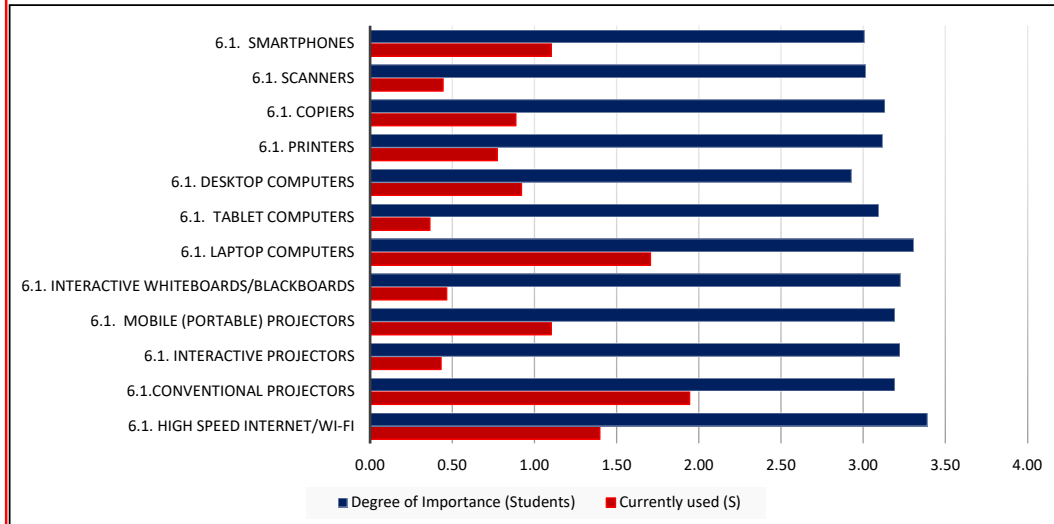
## Section 6. Facilities to Support Teaching and Learning

According to the teachers' responses the most popular facilities supporting teaching and learning are *Laptop computers, High speed internet/Wi-Fi, Conventional projectors, Printers and Copiers*. At the same time the teachers consider that the teaching process would be realized in the most effective way with the support of *High speed internet/Wi-Fi, Laptop computers, Interactive whiteboards/blackboards, Conventional projectors and Interactive projectors* (Figure 6.1).



According to the feedback received from the students in YSU during their learning the most applicable facilities are *Conventional projectors, Laptop computers and High speed internet/Wi-Fi* (Figure 6.2).

**Figure 6.2.**  
Adapted from “Student learning needs assessment” Survey

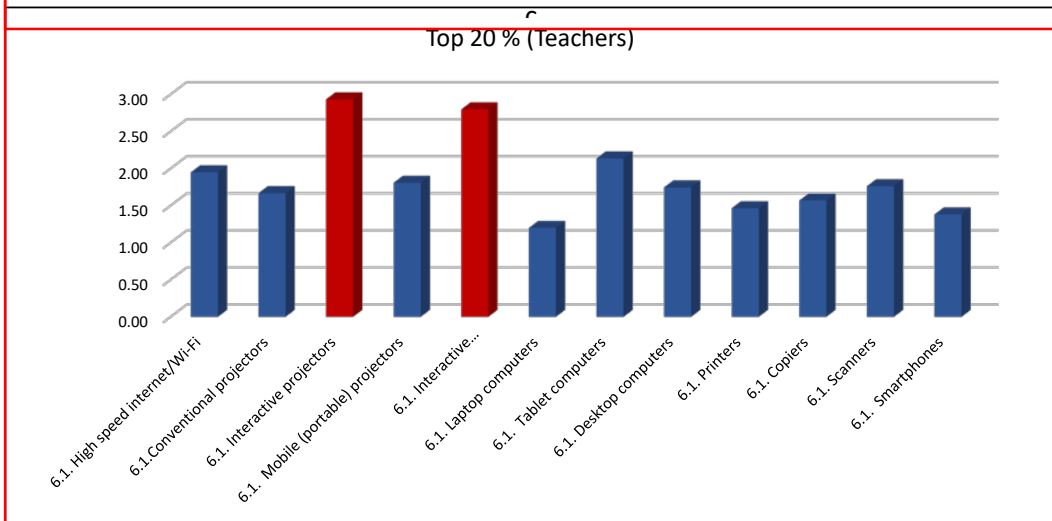


Question 6.1. Please select the facilities which are used to support your learning.  
Question 6.2. Please rate the facilities which would support your learning best from "Not effective" to "Highly effective".

If we take into account the fact that some of the technical means (facilities) mentioned above are exploited to some extent in YSU, then according to the teachers and students' feedback the most preferable facilities supporting teaching and learning are *Interactive projectors* and *Interactive whiteboards/blackboards* (Figure 6.3), (Figure 6.4).

**Figure 6.3.**

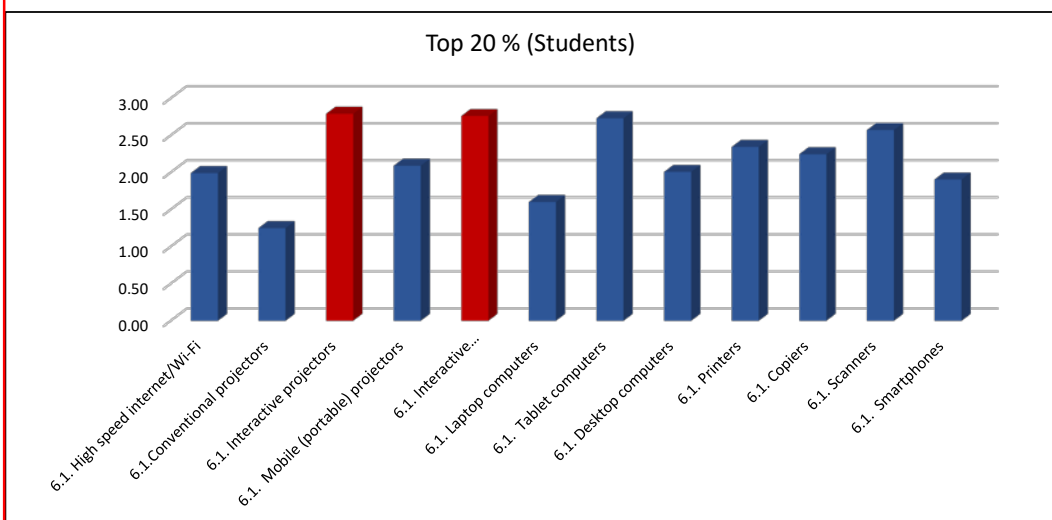
Adapted from “Teaching staff professional development needs assessment” Survey



“Degree of importance” deducted from “current use” according to teachers.

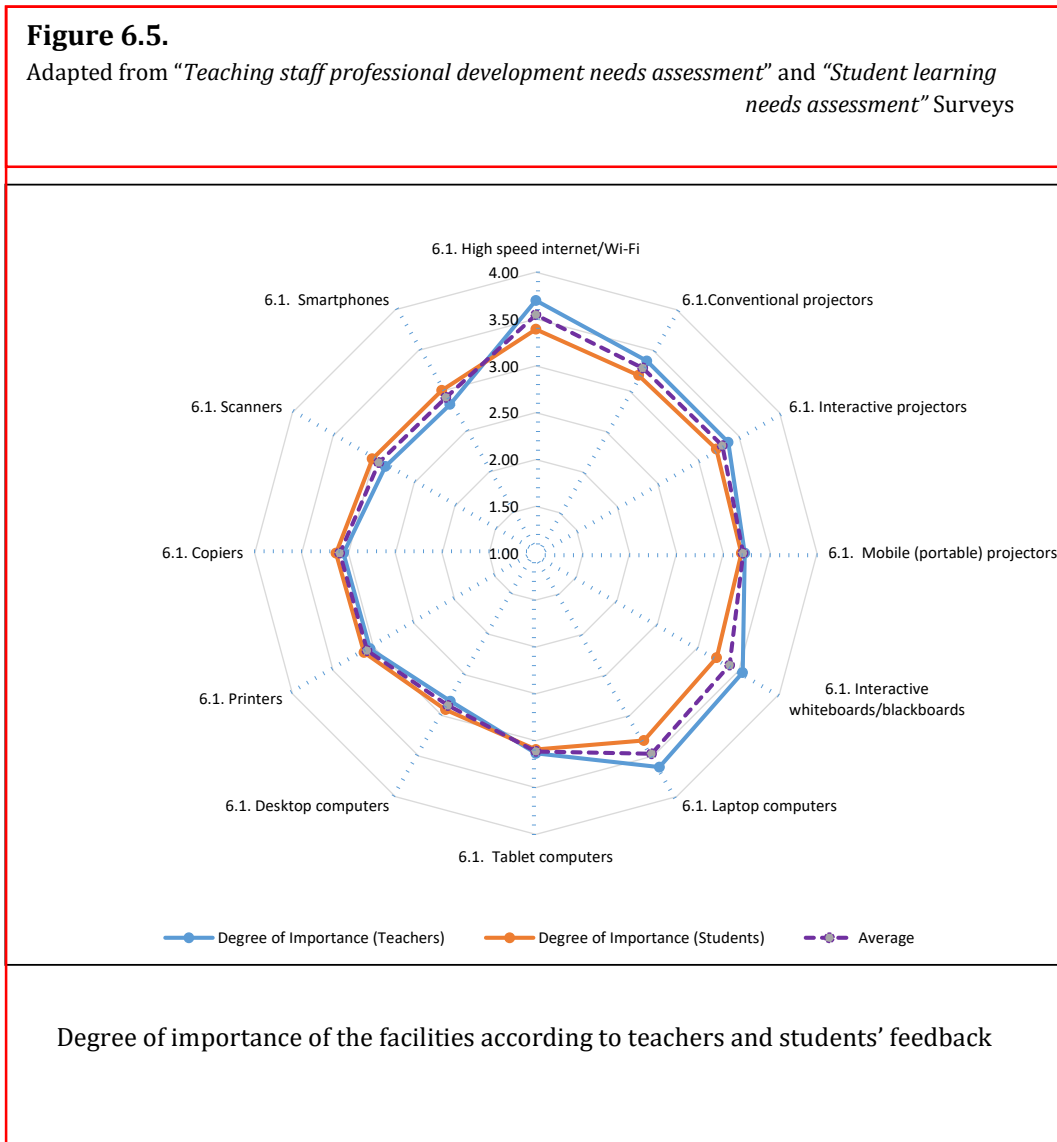
**Figure 6.4.**

Adapted from “Student learning needs assessment” Survey



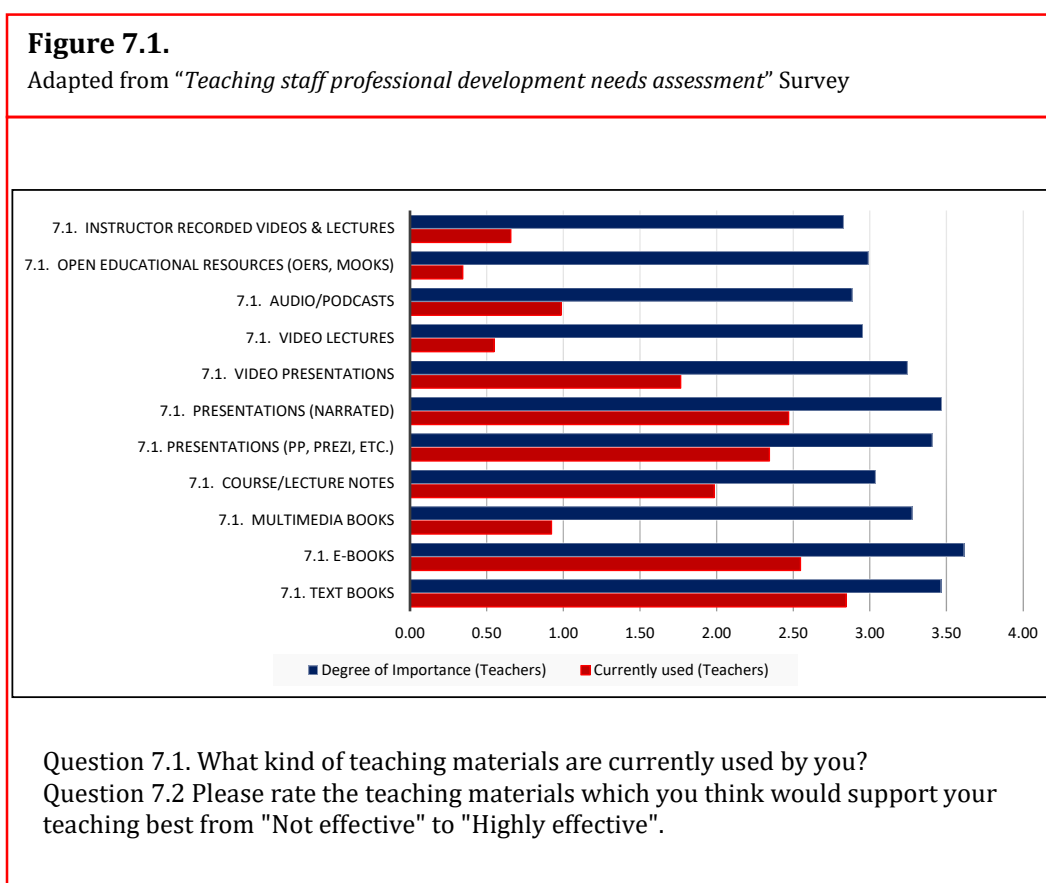
“Degree of importance” deducted from “current use” according to students.

As we can observe from Figure 6.5 the teachers and students' opinions concerning the use of the most preferable technical means absolutely coincide (Figure 6.5).



## Section 7. Teaching and Learning Materials

According to the teachers' feedback they generally use *Text books, E-books, Presentations (narrated), Presentations (PP, Prezi, etc.), Course/lecture notes, Video presentations* for teaching in YSU. At the same time the teachers prioritize the use of such teaching material as *E-books, Presentations (narrated), Presentations (PP, Prezi, etc.), Text books, Multimedia books, Course/lecture notes* and *Open educational resources (OERs, MOOCs)* (Figure 7.1).

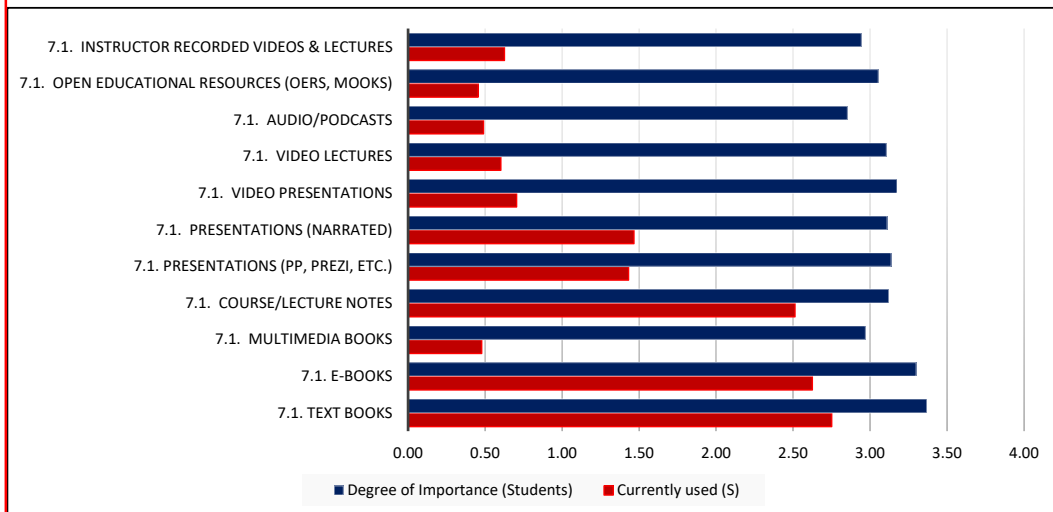


The students have mentioned in their responses that while learning they mostly use *Text books, E-books, Presentations (narrated), Presentations (PP, Prezi, etc.)*, whereas in the questionnaire they have given equal degree of importance to almost all the learning materials presented in the online survey form, excepting *Audio/Podcasts* and *Multimedia books* (Figure 7.2).



**Figure 7.2.**

Adapted from "Student learning needs assessment" Survey

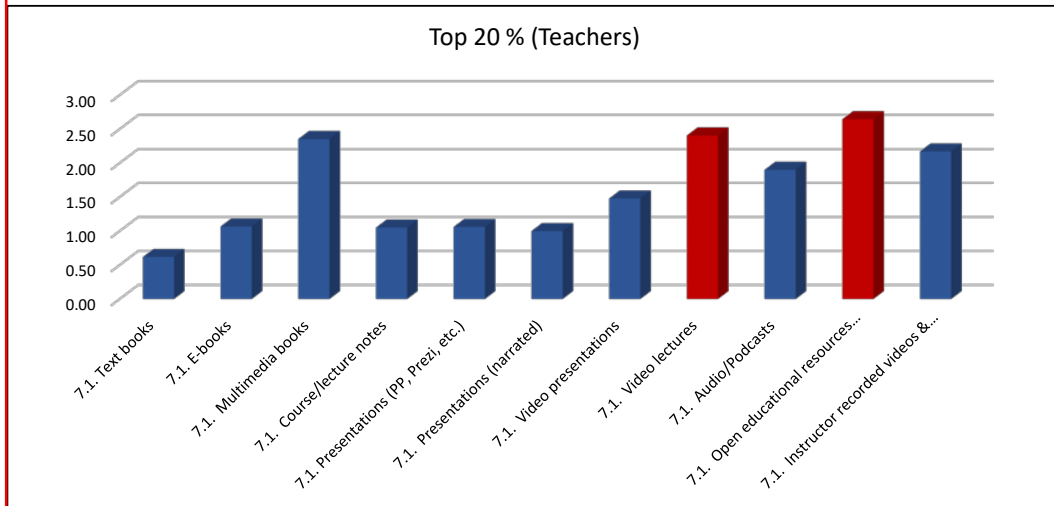


Question 7.1. What kind of learning materials are currently used by you?  
 Question 7.2. Please rate the learning materials which would support your learning best from "Not effective" to "Highly effective".

Taken the fact that some of the most important teaching materials mentioned above are already exploited to some extent in YSU, the most important teaching materials according to the teachers' feedback are: *Open educational resources (OERs, MOOCs), Video lectures, Multimedia books and Instructor recorded videos & lectures* (Figure 7.3).

**Figure 7.3.**

Adapted from “*Teaching staff professional development needs assessment*” Survey

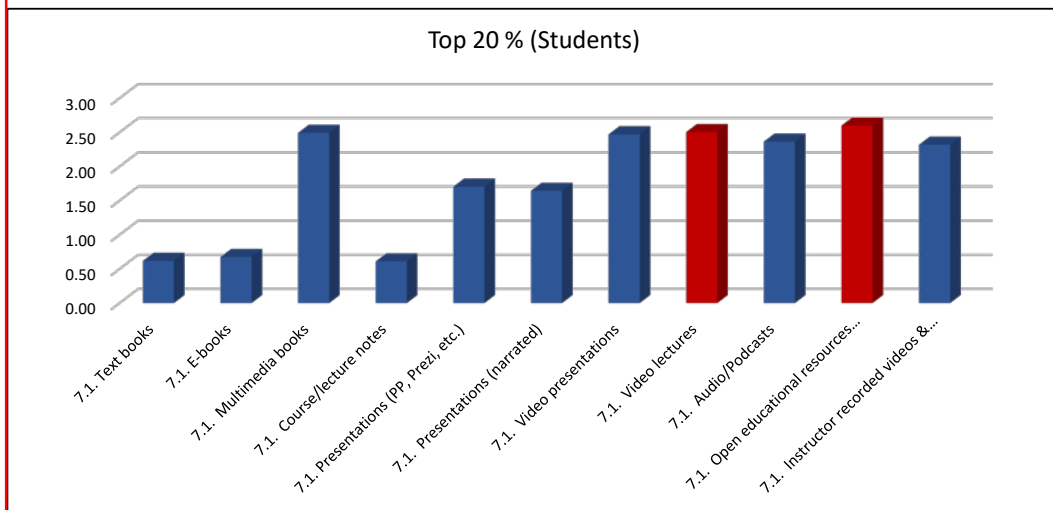


“Degree of importance” deducted from “current use” according to teachers.

Analogically, as according to the students’ responses some part of the materials important for learning is already used to some extent in YSU, the most preferable materials necessary for learning from the students’ perspective are: *Video lectures, Open educational resources (OERs, MOOCs), Multimedia books, Instructor recorded videos & lectures and Video presentations* (Figure 7.4).

**Figure 7.4.**

Adapted from “*Student learning needs assessment*” Survey

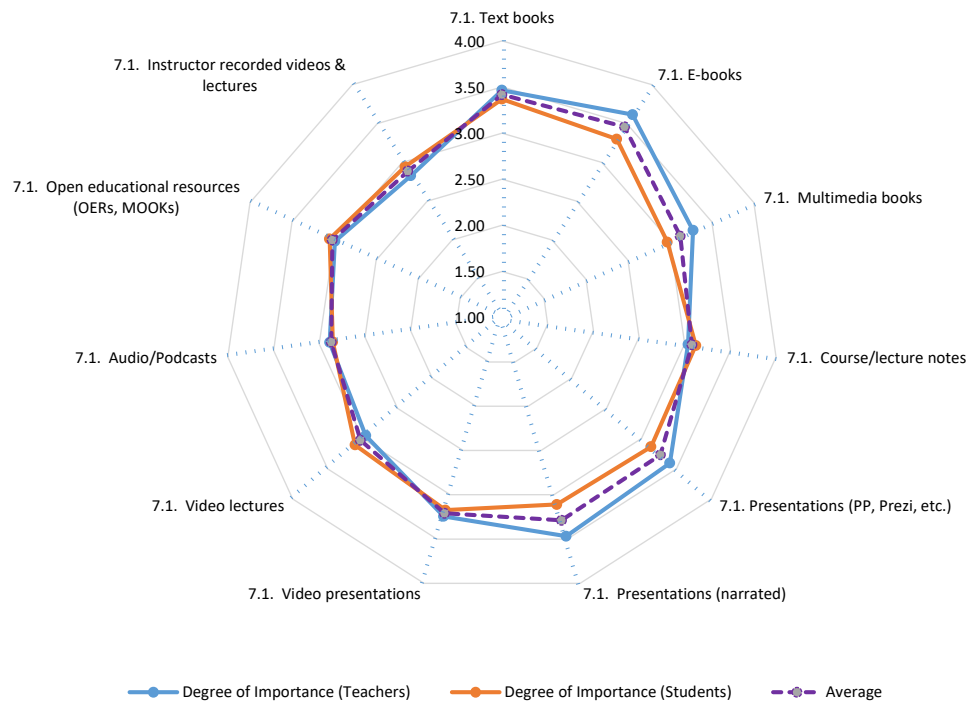


“Degree of importance” deducted from “current use” according to students.

It is clear from all the facts mentioned above that the teachers and students’ opinions concerning the degree of importance in relation to the teaching and learning materials qualitatively coincide. This is apparently shown in Figure 7.5.

**Figure 7.5.**

Adapted from “Teaching staff professional development needs assessment” and “Student learning needs assessment” Surveys



Degree of importance of the teaching materials according to teachers and students' feedback

## **Section 8. Additional Information Given by Teachers and Students**

In the eighth section of the questionnaires numerous suggestions and remarks have been received from the respondent teachers and students. The majority of the teachers and students' extended written responses chiefly related to the issues of the improvement of teaching and learning quality in YSU, the re-equipment of the auditoriums and laboratories, the necessity of replenishing technological devices in the processes of teaching and learning, as well as the questions referring to the methodology of the present Poll and so on. Both the teachers and students did not give such teaching, learning and assessment methods and approaches along with such technologies, facilities and materials that were not included in the questionnaires provided to them.

## Conclusions and Recommendations

According to the analyses and conclusions carried out in Sections 2-7 as the result of the Poll held in YSU the following generalizing conclusions can be made and corresponding recommendations - be suggested:

1. The innovative and technology-enhanced teaching and learning methods and approaches that are needed to be introduced in YSU are:
  - ✓ *Problem based learning,*
  - ✓ *Project based learning (project work),*
  - ✓ *Experience based learning,*
  - ✓ *E-teaching/Web- or Multimedia enhanced teaching,*
  - ✓ *Active learning,*
  - ✓ *Research based teaching,*
  - ✓ *Flipped classroom,*
  - ✓ *Hybrid/blended teaching,*
  - ✓ *Listening to audio recorded lectures or podcasts,*
  - ✓ *Engaging in logic games and brainteasers,*
  - ✓ *Engaging in online discussion questions,*
  - ✓ *Internships/field training,*
  - ✓ *Doing experiments in a lab.*
  
2. The technologies and facilities supporting teaching and learning necessary to be present in YSU are:
  - ✓ *Interactive whiteboards/smartboards/blackboards,*
  - ✓ *Interactive projectors,*
  - ✓ *Social Media/Web 2.0 & Web 3.0 technologies,*
  - ✓ *Classroom response systems,*

- ✓ *Multimedia tools,*
- ✓ *Digital games and simulations,*
- ✓ *E-portfolios.*

3. The new forms of teaching and learning materials that are demanded for the needs of YSU are:

- ✓ *Video lectures,*
- ✓ *Multimedia books,*
- ✓ *Instructor recorded videos & lectures,*
- ✓ *Video presentations,*
- ✓ *Open educational resources (OERs, MOOCs).*