EMPOWERING TEACHERS FOR A STUDENT-CENTRED APPROACH (by Irena Marinko, Jurij Marinko (IBS International Business School Ljubljana, Slovenia); Zita Baužienė, Virginija Kairienė, Indre Knyviene, Dalia Perkumienė (Kauno kolegija, Lithuania), Andrew Gołębiowski, Monika Krawczak, Gerard Paweł Maj, Katarzyna Marcinkiewicz-Marszałek (Radom Academy of Economics, Poland); Nicholas Daniels, Jenny Hughes, Angela Rees (Pontydysgu Ltd., U.K.)

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Abstract

This research is **the first output of the Erasmus+ project *Empowering teachers for a student-centred approach*** that investigated the student-centred and/or personalised approach in several European countries, prepared a handbook of good practices for teachers and published several peer-reviewed articles on student-centred learning. The **aims of the research** are to critically evaluate the latest research findings in student-centred learning and make an empirical research on how university teachers in three European countries use this pedagogical approach, how they try to personalise learning, and what are the main challenges faced by teachers. The **research methodology** includes a survey of the contemporary literature on student-centred learning and an analysis of questionnaires completed by university lecturers. The introductory part discusses basic theoretical concepts, definition of student centred-learning, offers a brief outline of its development, the positive outcomes and criticism of this approach and application of student-centred learning. The second part of the literature overview discusses the characteristics of the student-centred learning process, the most popular types of student-centred learning, and the importance of giving feedback to students. The research shows that student-centred learning is introduced in different professional fields; different geographical areas and that it can be practiced even in big classes. Whilst teachers and students are acquainted with student-centred learning to a certain degree, they are in need of more guidance, knowledge and understanding regarding its application and practice. The third part of the theoretical research discusses teachers' role in implementing SCL in higher education. It stresses the importance of the Bologna system in the development of student-centred learning, discusses the concept of student-centred studies and carries out

an analysis of documents and scientific literature in order to identify criteria for the assessment of the teacher's role in student-centred studies.

The empirical part of the research presents data analysis of the questionnaires answered by 634 teachers from 42 tertiary institutions in 3 European countries. The analysis shows that SCL, or some of its facets at least, are well known to teachers and that they are aware of the positive effects of student-centred learning on student attainment and motivation. The final part of the empirical research includes a comparative analysis of SCL practice in 3 European countries and directions for further development of SCL in higher education.

Keywords: student-centred learning, research, teachers, high school education.

Contents

1 LITERATURE SURVEY

1.1 BASIC THEORETICAL CONCEPTS

In the main, this literature review mainly covers the period from 1990s to the present day and is restricted to **peer reviewed articles and books** published all over the world. It does not include unreferenced work and/or institutional blogs or other social media in any significant way. Although these are rich sources of information and opinion, particularly regarding the most current issues relating to the effects of technology on learning, they are largely outside the scope of this review.

There is an ambiguity in the **expression "empowering teachers for a student centred approach"**. One interpretation is in the sense of preparing teachers to use a student centred (SC) approach addressing questions such as what the prerequisite conditions are, what strategies can be used, what the critical success factors might be, how is »success« measured and so on. Much of the available literature is based on issues of practice and on case studies and this has been included in the review.

Another interpretation of "empowering teachers for a student centred approach" is more abstract and descriptive, rather than concrete and prescriptive. Many writers have explored the underpinning theory or constructs and have provided models and commentaries in an attempt to suggest reasons why teachers should be empowered to provide a SC approach or have compared and contrasted SC learning with more traditional approaches or considered the advantages and disadvantages or the consequences. Other writers have been concerned with the broader picture in which SC learning is located in a culture or socio-economic and political context and some have examined SC learning as an approach which is part of - or reflects - wider pedagogic change looking at how SC learning both shapes and reflects those trends. These perspectives have also been included.

In reviewing the literature there have been problems, for example reconciling **different definitions of SC learning** or divorcing SC learning from related topics such as personalised learning. There have been constraints such as not using unreferenced work or ideas emanating from online communities through social media although these sources might provide good insights into current thinking.

O'Sullivan (2004) says the concept of SCL can be credited to Hayward in as early as 1905 and, later, to Dewey's work in 1956. In its many forms and incarnations, SCL, or facets of it, also occur in the work of Piaget and Vygotsky but any real paradigm shift towards SCL in its current form occurs in the latter decades of the 20th century. This shift from teaching to an emphasis on learning means that there has been a parallel shift in power away from the teacher to the student (Barr, 1995). Whilst SCL is acknowledged in most education systems of being generally worthy or beneficial, there are few examples where it has been adopted wholesale across all teaching sectors, subjects and teaching activities. Possible theories and explanations for this are given later in this review.

Because SCL occurs in different guises and is subject to different definitions, it can be easy to overlook evidence and examples of ideas and practice. Maria Montessori, a forerunner of SCL, contributed to the theory and practice by implementing a curriculum structured to encourage children to learn through independent self-directed interaction with previously presented activities. Carl Rogers' ideas about the formation of the individual also contributed to the theories and body of work that have informed contemporary ideas on student-centered learning. Rogers wrote "the only learning which significantly influences behaviour [and education] is self discovered", Kraft (1994). Also a number of others like Bruner, Ferriere, Rousseau, Freinet, Gardner, Rodari, Ciari, reported on the benefits of experiential, hands-on, student-centered learning (Çubukçu, 2012, 50).

Many researchers and practitioners have already begun to discuss the diversity of opinion regarding what constitutes an SC approach. Whilst there is a broad consistency in general opinion there are also growing concerns regarding the apparent misinterpretation of the

“ingredients” of SCL and what SCL actually “looks” like in practice. “A student-centred classroom isn’t a place where students decide what they want to learn and what they want to do. It’s a place where we consider the needs of the students, as group and as individuals, and encourage them to participate in the learning process all the time”, Jones (2007). Lea et al (2003) also found that different interpretations of SCL meant that “...many institutions or educators claim to be putting student-centred learning into practice, but in reality they are not”. Any idea or theory that is open to interpretation is bound, at least in part, to be interpreted incorrectly. Personal interpretation can cause theory to be applied too meanly, too generally or merely inappropriately due to lack of proper understanding of the underlying tenets and desired outcomes.

O’Neill (2005) also cites that the range of terms used to describe SCL has led to confusion surrounding its implementation. Our own experience of terms such as “self-directed learning”, “autonomous learning” and “flexible learning” used to describe the same (or similar) idea or process has also, we believe, led to a bloom of different interpretations of SCL. It is also likely that the number of synonymous terms is increased by those coining a new phrase/concept when, in reality, that which they are describing is either a mutation of the original or a hybrid of two pre-existing ideas. These practices may be the norm for theorists and researchers but for practitioners and classroom teachers it is unlikely to be helpful in providing clarity and, ultimately, consistency and superiority of practice.

This suggests that there may be a disconnection between the theory and the implementation and practice of SCL which, in turn, suggests a need for a clearly defined set of prerequisite conditions or principles that are measurable or capable of being assessed.

Whilst there are differences in interpreting what SCL is, there are also broad and consistent similarities in the identifiable facets of SCL. These facets or principles can be broadly interpreted as targeting specific needs and knowledge deficits, the use of methods that suit students learning styles, maximising student engagement and ensuring relevancy

in course content. An argument can also be made for the inclusion of access, meaning that students should have some say or control in how they access their learning (online, small groups, one-to-one sessions with tutors) and when they are available to learn (convenient day and time and around other commitments). But flexibility in the opportunities to access education cannot in itself be considered an example of SCL because it does not always influence course content or teaching methods and is only meant to answer students' logistic or timetabling needs, not their learning needs or knowledge deficits.

There is evidence to suggest that different subject specialists find SCL easier to adopt, more appropriate for their teaching context and more successful than others. Barraket (2005) suggests that a re-orientation of the curriculum to student-centred learning can, in specific cases, have a positive effect on student performance. This study was carried out in a "...masters-level social research methods subject" but there seemed to a general agreement that MST faculties are especially open to SCL.

The research that recommends the adoption of SCL above other, more traditional approaches is convincing in its evidence. Prince (2004) found there was a year on year increase in enrolment and curricular retention in courses that practiced active learning compared to the same courses where students were subject to traditional lecturing. Also, The Stanford findings provide independent evidence that deeper learning strategies and student-centered practices increase academic achievement. The Stanford Center for Opportunity Policy in Education (SCOPE) looked closely at four schools achieving positive outcomes and found they were engaging and developing high levels of proficiency for students of colour, English learners, and low-income students at levels that far exceeded traditional schools serving similar students, Friedlaender (2014). Swan (2007) found that in an environment where retake students were taught mathematics using SCL ".... learning increased with both the number of activities used and the degree to which the teaching was reported (by students) as student-centred". However, "Learning gains were modest, possibly reflecting the difficulty of algebraic concepts for these students". Interestingly, the study found that not only were academic gains modest

but “Students' confidence, motivation and anxiety remained largely unchanged, in contrast to a control group, where the more transmission-based approaches were associated with a small decline in these aspects”. Findings such as these add to the confusion regarding the mereits of SCL because they seem to contradict some of the most supposed key benefits of SCL such as increased motivation, enthusiasm and increased confidence.

In contrast, Felder et al (1996) reported resistance from students: “Some students view the approach as a threat or as some kind of game, and a few may become sullen or hostile when they find they have no choice about playing”. They found that students in higher education that had always been spoon-fed in the learning environment could be particularly resistant due to the belief “... that they are paying tuition or their parents are paying taxes to be taught, not to teach themselves”. This may suggest that there is a significant obstacle to overcome when implementing SCL. By shifting the onus from the teacher to the student, a large portion of responsibility must also be transferred which may not be to the students’ liking.

Whilst there are numerous examples and suggestions regarding strategies that make SCL possible these in themselves may not be sufficient in ensuring a consistency in good practice. It would appear that it is fairly essential that practitioners understand the theory as well as familiarising themselves with excellent examples or case studies of SC activities in action.

Whilst some may see SCL as something like a panacea for all learning contexts, others believe it is a system that can place an unusual cognitive burden on the learner. It is also apparent that a significant portion of the research that found distinct benefits in using SCL was carried out with smaller groups of learners. Indeed, even the possibility of using an SC approach with large groups may be inherently problematic. “... student centred learning with classes of over thirty students… may not be easily achieved, practical or even possible in the university setting”, Sparrow (2000). The findings of this study also reveal that even in a small group context, “Compromises and variations in emphasis

between student centred and teacher centred strategies incorporating negotiated and non-negotiable content with flexible delivery modes may be a way forward". This contradicts the idea that SCL requires the teacher to undergo a permanent change in teaching practices but, instead, suggests that the surest way to empower teachers through an understanding of the theory of SCL would be to help them understand that SCL may not always be the most appropriate approach - that they should use their professional judgement when deciding on the most appropriate teaching techniques.

The lack of a definitive theory supported by well-documented examples of practice has hampered the wholesale adoption of SCL by educational institutions. But that is not to say that SCL isn't making any inroads; strategies such as assessment for learning (AfL), differentiation and collaborative learning are all components or derivatives of the general idea behind SCL and all are practiced widely across teaching sectors.

The literature survey seems to suggest that SCL has made its way into higher education, and that the Bologna system has had a very important role in its development. Whilst the large body of literature and accompanying definitions would seem to represent a wealth of resources for educational institutions and practitioners, there is also some criticism and disaffection worth discussing.

In order for SCL to empower teachers they will require **a clear understanding of what SCL is, what it "looks" like in practice and what the benefits are**. They will also need to understand how they can assess their (and their students') progress with the aid of clear and structured success criteria. Presenting them with successful case studies and empirical evidence would also be beneficial in encouraging them to implement SCL and would also act a guide to troubleshooting as they move away from their traditional teaching methods. Projects such as Time for a New Paradigm Shift in Education: Student-Centred Learning, Attard et al, (2010), have begun the process of standardising SCL planning, practice and assessment by creating SCL checklists and step-by-step diagnostic strategies for policy makers and practitioners. The work covers all aspects of

implementation and advice to all stakeholders on creating and maintaining a consistent SCL environment.

Teachers take their responsibilities very seriously and are not overly fond of experimenting with their students' futures by dabbling in strategies that have not been trialled or lack consistently positive outcomes. Whilst educational institutions and writers are very open to theory and supposed good ideas, these are not usually enough to convince teachers to commit to adopting a new attitude, a "new state of mind" or a new way of working. It is of course true that they can be made to conform, obliged to implement and practice new strategies and techniques, but if we want the best results we must concede that that teachers should believe in what they are doing.

It would be impossible to finish without giving some recognition to the role that information technology must play in the development and implementation of any new educational theory or strategy today. Even in the few short years since the publication of the majority of papers and articles read in the process of writing this review, the growth of technology in education has been exponential. Whilst the benefits of using technology may be plentiful, the peer-reviewed literature and research in the field of technology and SCL is somewhat less so. Having said this, the fact that technologies could, should or are being used in SCL is often referred to in the research but only in passing, as though it is something that is not important yet.

SCL needs a more consistent and solid identity and teachers need a generally agreed model of SCL that is better defined, based on a combination of theory, practice and evidence, utilises technologies to their best advantage and is underpinned by effective assessment strategies. Teachers need a deep understanding of what constitutes the successful practice of SCL and what the best outcomes for students "look like". It is only then that we can hope to see the kind of seismic shift required in teachers' attitude, approach and practice to make SCL a genuinely beneficial mode of education – and only then that we can hope to empower teachers in using student-centred learning.

1.2 CONTEMPORARY STUDENT-CENTRED LEARNING

Literature overview represents **the latest research findings** in student-centred learning and offers **the main target groups** - lecturers in the participating and other countries, managing boards of HEIs, students, ministries of education, public and private professional educational organizations and larger public - information about contemporary good practices of the student-centred learning and/or personalised approach. The literature survey discusses the learning process, the most popular models of student-centred learning, the importance of giving feedback to students, presents that student-centred learning is introduced in different professional fields, different geographical areas and practiced also in big classes. It also shows that teachers and students are acquainted with student-centred learning to a certain degree but that they are in need of more guidance, knowledge and understanding regarding its application and practice.

1.2.1 Characteristics of the contemporary student-centred learning process

Zhu and Engels (2013) claim that **student-centred learning is the most important innovation on the micro level** that can be placed beside the communication technologies and the use of collaborative learning approaches. The authors mention that innovations like student-centred learning are most typical in organisations that have integrative structures, emphasize diversity and that also place an emphasis on collaboration and teamwork.

The main characteristics of a student-centred approach are the considerations given to individual learners' experiences, perspectives, backgrounds, interests, capacities and needs (Harkema and Schout, 2008). Within this approach teachers mainly focus upon what students should learn and emphasize why (Bransford, Vye & Bateman, 2002). Teachers take into account the existing knowledge of students (Bransford, Brown, Cocking, 2000; Protheroe, 2007), provide different opportunities for students to learn,

often change teaching methods, help students who have difficulties and consider their background. Teachers discuss with students which study activities lead to good results, expose students to looking for alternatives and trying to find their own solutions. Examination questions refer to real-life situation and do not lead to categorising students with regard to their scores or grades. The basic conditions for an effective learning situation are the learning environment in which learners feel safe and accepted; numerous opportunities for students to confront new information, experiences, and personal discovery of new understandings that are all adapted to the individual students and their pace of learning (Mc Combs et al., 1997).

Harden and Laidlaw (2013) emphasise that teachers who work on the basis of the student-centred approach should provide feedback to the student, engage the student in active learning, individualise the learning to the personal needs of the student and make the learning relevant. They quote Hattie and Timperley (2007) that students should receive constructive and enough specific feedback, an explanation and that the language used in doing so should be non-evaluative, given in time and frequently and should help learners to plan further studies. Students have individual needs regarding personal capabilities, motivation and what drives their learning goals and career aspirations, achieving mastery of the course learning outcomes on entry to the course, learning styles and the place of learning – on campus or at a distance - and the time of learning. Individualisation can be achieved in many ways: The teaching programme may be arranged so that students can choose to attend a lecture on a subject, view a podcast of the lecture, engage in collaborative problem-based learning with their peers or work independently using an online learning programme. Learning resources or learning opportunities can be adapted or prepared so that the students' learning experience, as they work through the programme, is personalised to their individual needs. When learning experiences are scheduled in the programme, such as a session with a simulator, the time allotted for an individual student is not fixed, but is the length of time necessary for the student to master the required skills. Also the curriculum can be designed so that it helps students' individual requirements e.g. by including experiences in the early year of the

course, by encouraging a problem-based approach, by the use of virtual problems related to the subject (Harden and Laidlaw, 2013, 31).

Mclean and Gibbs (2010) claim that the students should be included also at all levels of curriculum design, implementation and evaluation. As “clients”, students need to be part of the process of developing a learner-centred curriculum. A clear admission policy (with appropriate support structures) should be developed. The school should support student diversity and individual learning needs, the psychological and social aspects of student diversity, develop students’ self-learning skills, allow time for independent learning and pursing areas of interest, regularly review the core curriculum content, recognise that their education continues beyond graduation, provide ample opportunity for student professional development and not pay lip service to learner-centredness.

Çubukçu (2012) lists a number of characteristics of the student-centred teaching programme, emphasising tasks that attract students' interests, organising content and activities around subjects that are meaningful to the students, determining clear opportunities that let all students develop their own learning, skills and progress to the next level of learning, organising activities that help students understand and improve their own viewpoints, developing global, interdisciplinary, and complementary activities, supporting challenging learning activities even if the learners find them difficult, and emphasising activities that encourage students to work with other students in cooperation. In student-centered learning environments it is essential that students take responsibility for learning and that they are directly involved in the discovery of knowledge, choosing the materials used so that they offer them a chance to activate their background knowledge and ensuring that the planned activities are based on problem solving. Various institutions and outside-class activities are incorporated to support students' learning (Cubukcu, 2012, 53). The time dimension should be evaluated in psychological terms. It is important that the students have enough time to construct the information cognitively and connect the new knowledge to real life. The students should have enough time for communication, for learning, synthesising, observing and applying new knowledge to social life, work, family and society. When talking about “location” of student-centred

learning we should include all the places where students learn: school, library, museums, work place and home.

Lemos, Sandars, Alves and Costa (2014) claim that the **Bologna Process emphasises the importance of the student-centred approach**.They point out that this system introduces students to the idea of taking responsibility for their learning activities, increased retention of the content, improved student engagement and improved status of the learners. Their study tried to investigate a new mixed-methods approach to evaluate the student centredness of teaching and learning. The research results showed that, in particular, teachers appreciated especially the following: the importance of engaging students in the learning process, that the class was a place for discussion, students were encouraged to be autonomous and that there was a shift in power relationships from teachers to students. Course objectives and assessment programme remained under teacher control. Teachers used content to capture student curiosity and increase motivation. Teachers considered themselves more as facilitators: they gave students high responsibility in classroom activities, and provided instant feedback.

According to the **European Students' Union** (Student-centred learning, 2010) the student-centred learning is actually a synonym for quality higher education. Among other student-related issues they emphasise transparent procedures for students to be able to give feedback on the quality of the educational process, students are consulted on curriculum content, on the teaching and evaluation methods used, are involved in periodic programme quality reviews, are involved as full and equal members in committees, procedures for students to appeal decisions regarding their academic attainment or progression are provided, they are consulted when learning outcomes are designed, student needs and the diversity of the relevant student group are considered when designing learning outcomes, students are informed on the intended learning outcomes before they start a course or programme component, representatives of teachers and students are involved as full and equal members in the panels undertaking quality assurance reviews, institutional quality assurance reviews and guidelines take into account the overall elements of teaching and learning, prior learning (in non-formal

learning environments) is recognised by the institution for the purpose of access into educational programmes, the process of recognition is easy, recognition of prior learning can be done without significant costs or bureaucracy, there are special support measures in place in order to help students from disadvantaged backgrounds, learning paths are flexible enough so as to permit combining work/family life and studies, group-work is used in the learning process, the goals of the learning process are agreed upon between teachers and students, peer and self-assessment are used as a method in the student assessment process, projects are used in the assessment of students, simulations of tasks and real life situations are used in the assessment of students, students have access to appropriate research and study facilities, the institution contributes to promoting a national/regional culture of student–centred learning, the programme uses a student-centred learning approach in providing training on the use of innovative teaching methods and student-centred curriculum development. Additionally, in the classroom, there is practical implementation of an SCL approach that includes a number of following components: problem-based learning, group project work, student-centred active learning, resource-based learning, use of the case method, role plays, classroom workshops, group presentations, use of a web-conferencing environment, particularly in distance education, small group work that enables students to learn how to work in a team, in the process of which they identify and fill the gaps in their knowledge. They also stress the importance of involving students after the task is completed, making self-assessment comments, making peer-assessment feedback comments, suggesting self-assessment grades and negotiating self-assessment grades.

The European Students' Union seems to have the most detailed and concrete list of what constitutes student-centred learning. They emphasise the importance of feedback in learners' progress, students' rights to decide about curriculum content, teaching and evaluation methods, using committees to evaluate the quality of the institution, the use of credits, stressing that prior learning should be recognised, emphasising the importance of group-work, the use of projects, different forms of assessment, simulation, research, IT, the collaboration of librarians and teachers, and innovative teaching methods.

This chapter describes a number of different ways that enable focusing upon students within the learning process, assessment and even curriculum development. It includes the opinions that the Bologna process emphasizes student-centred learning and/or shows that indicators of higher education quality are based on the student-centred approach. Since the Bologna system has been used in university education for a number of years this might suggest that universities have introduced a number of new learning methods based on the student-centred approach. On the other side universities are big and rather rigid organisations that accept changes very slowly. Besides, student-centred approach requires from lecturers a lot of work and even personal changes which might hinder the process. Further chapters of the research and its empirical part will show if higher education institutions in the participating countries accepted student-centred approach or if the process is not as fast as expected.

1.2.2 Popular types of student-centred learning

Among the most often mentioned **types** of student-centred learning are problem-based learning, project-led education, learning contracts, flexible learning, self-directed learning, inquiry learning, just-in-time checking, personalised learning etc.

Tarhan and Acar-Sesen (2013) describe **problem-based learning** (PBL) as an active learning approach which was first developed in medical education. Before students start learning, they are acquainted with a problem and then have to learn some new knowledge about the topic in order to solve the problem. Students receive information about PBL process, rules of working in cooperative groups, the objectives, the requirements roles, and the assessment strategies. The teacher acts as a facilitator who guides students' learning through the learning cycle. According to this cycle, also known as the PBL tutorial process, the students are presented with a problem, formulate and analyse the problem by identifying the relevant facts from the problem, and, finally, as students understand the problem better, they begin to generate hypotheses about possible solutions. During the self-directed learning process in PBL, students research the knowledge deficiencies and identify the concepts they need to learn more about in order to solve the problem. After each session is accomplished in the classroom environment, students collect data and information from the library materials and resources on the Internet and books. Students then share what they have learned, reconsider their hypotheses, and/or generate new hypotheses in light of their new knowledge. When completing the task, the students reflect on the abstract knowledge gained by oral presentation and begin to study a new problem through PBL. This study confirmed that PBL as an active learning approach had positive effects on higher learning achievement, overcoming alternative conceptions, and development of some social skills. Therefore, it was suggested that instructional methods promoting high level cognitive processing such as the PBL should be integrated into the chemistry curriculum from middle to undergraduate level.

Project-led education, in which problem and project-based learning are among the most known and used learning strategies, requires that students are actively involved in learning (Fernandes et al, 2014). Project-based learning involves students in complex projects that require problem-solving, research activities, decision making and realistic products or presentations (Thomas, 2000).

One of the ways of including students in the research work and/or student-centred learning is also using **learning contracts**. The learning contract ensures that students plan their learning experiences together with lecturers. Brecko (2004) says that the main advantages of the learning contract are that learning is of interest to the learner, it motivates him, the learner is free to choose the area of learning, learners can learn at their own pace, students are focused upon their learning, the learning contract respects differences in individuals and that it increases confidence and excitement in learning. Frank & Scharf (2013) find that learning contracts give opportunities for self-directed learning that fosters greater accountability, responsibility and commitment. The learning contract has proven to be among the best ways to stimulate active approaches to learning and to acquaint students with the research process because it makes students take an active role in defining and fulfilling their learning (Bone, 2014, 122).

Within **flexible learning** students may negotiate with their lecturers on matters such as choice of topic areas, use of support materials such as textbook and web resources, timetable and venues for meetings with their instructors and the nature and weighting of individual assessment tasks. Students have some autonomy over how, when, where and what to learn. In this way, flexible learning takes account of the individual needs of students and therefore implies a more 'student-centred' approach to learning (Guest, 2005, 287).

Silen and Uhlin (2008) pay special attention to **self-directed learning** as an essential part of problem-based learning, and, in a broader sense student-centred learning. Self-directed learning should not be considered just as self-study and/or students' own concern. Self-directed learning means that students have to study from the corresponding sources of

literature in order to to develop information literacy skills/competences. Information literacy is one of the most important factors for the development of problem-based learning. Problem-based curricula offer many opportunities to include information literacy as a natural part of the learning process. Silen and Uhlin suggest that it is necessary to give the students the freedom to search and make choices about what to read, but they also need challenges, support and feedback to develop information literacy. In this regard university teachers can get a great help from librarians who are experts on information literacy. They can support the students' views on the information that they need to start thinking about problem-based learning. Librarians are important not just as providers of information literacy but should be included in problem-based learning as people who could help teach students how to become life long learners.

Inquiry learning requires students' active learning by exploring data and by seeking information (Plush, 2014). Inquiry learning usually starts with questions and not with lectures. Students work in teams and examine data or explore models. Plush mentions a number of researchers who believe that inquiry learning improves problem solving skills, understanding and motivation. There are also some opinions that inquiry learning has negative effects on the content coverage (but not on student grades).

Just-in-time teaching is a type of student-centred learning developed by Novak, Patterson, Gavrin and Christian for undergraduate physics courses. It involves the use of online activities in the form of short-answer and multiple-choice questions that students are required to complete just prior to attending a lecture (Plush, 2014).

The term **personalised learning** is very often used in connection with student-centred learning and frequently has the same meaning. According to Johnson (2004) the term personalised learning was first used by British politicians who stressed that personalised learning means really knowing the strengths and weaknesses of individual students, the necessity of developing the competence and confidence of each learner through teaching and learning that builds on individual needs, that every student should enjoy the study choice, that it requires a new school organisation, and that the community should support

schools in this progress. Rich (2014) claims that the expression “a personalised approach” was introduced from the business world focused on providing the consumer with a very wide range of products.

According to Hambleton, Foster and Richardson (1998) the characteristics of the personalised system of instruction are:

1) Students proceed through the course at their own pace.
2) Students must show that they have mastered the preceeding course before going to the next.
3) The teaching materials are largely text-based.
4) There is tutorial support and individual assessment of each of the courses.
5) Lectures should motivate students rather than deliver content-based courses.

There are many critics of personalised learning. Prain et al. (2013) discuss opinions of numerous authors who speak about the conceptual coherence of personalised learning but they still claim that personalised learning is a key strategy to improve student achievements.

There are some examples showing that personalised learning brings about good results. Choi and Ma (2014) describe a school in Hong Kong that managed to develop a personalised instruction strategy with student-selected vocabulary. To help students whose vocabulary was rather poor, a number of low-achieving teenagers in Hong Kong were told to design and make their own personalised curriculum. They had to select from their preferred sources five items per school day and then record and retain these items. The results of the research showed that this personalised strategy took into account the learners' differences, motivated responsible learning behaviour and led to satisfactory marks.

Another interesting example of personalised approach to education was made in Sweden. Eiken (2011) described personalised students' education by combining goal setting, weekly coaching, personalised scheduling and timing and a unique curriculum on the

web-based learning portal. Students listened to lectures, attended workshops, seminars, work in laboratories etc. Parents, students and teachers/coaches met at the start of every term and defined an individual educational plan and long-term goal for each student. Students had weekly meetings with their coach to see if they had met their goals and to plan for the coming week. The author reported that students developed improved personal responsibility for their learning. Each of the teachers also acted as a coach for about 20 students in order to provide support when necessary. The timings were flexible which allowed students to attend a number of group lessons, presentations, to study individually or visit teacher-led workshops. However, timetables were defined during weekly coaching sessions. Students were monitored and assessed on continuous basis. Rather than belonging to a specific class, students belonged to a base group and spent time in various group formations. Some of their activities were compulsory and some voluntary. The curriculum was designed in steps and enabled students to progress on an individual basis without being tied to a class or grade. The curriculum, syllabus, steps, texts and assignments were on the web-based learning portal so that students could access assignments and resources whenever they wished via the Internet. The learning portal also gave insight to parents, and served as a repository for teachers' resources (presentations, planning tools, lessons etc.).

This chapter does not include all the types of student-centred learning but just those that are most often found in literature. Some authors use them as synonyms for student-centred learning, others as strategies or even speak about teaching methods. Besides, there is no clear differentiation among some terms, e.g. problem-based learning, inquiry learning, project-based learning etc. The problem of right definitions becomes even more complicated when we start thinking if personalised learning is a type of the student-centred learning or a special construct with no clear grounding. This research and/or this project do not intend to discuss or clarify the definitions of different types of student-centred learning. Our task is to make a theoretical framework for the research and for the handbook of good practices. Therefore we use the terms as mentioned above and have included personalised learning among other types of the student-centred learning. We

speak about personalised learning as a type of student-centred learning which tries to bring new possibilities to adapt learning to individual students' needs.

1.2.3 Assessment in student-centred learning

Assessment has always been one of the most important points of the student-centred approach and there have been numerous suggestions on how to introduce improvements in this area. Randall and Zundel (2012) claim that many teachers and scholars have tried to change the old assessment procedures with content-heavy, summative and norm-referenced approaches by including more constructivist and student-centred assessment practices; their aim was to introduce more flexible, integrative, contextualized, criteria referenced and formative assessment (Ellery, 2008). According to Randall and Zundel assessment is much more than grading. Assessment represents defining the criteria that can be observed, observing the performance, judging the performance, informing the students of the results and giving advice on how to improve. Randall and Zundel conducted a study that explored the effectiveness of oral and written formative feedback. The results of this research showed that students felt the positive effect of multi-channel feedback. Students' learning improved and their motivation increased. Students prefer feedback comments about the task not themselves (Orsmond, Merry, & Reiling, 2005). They like comments that discuss strengths and weaknesses; explain mistakes and give advice on how to improve (Lizzo & Wilson, 2008). Scott thinks that feedback should be timely, and as specific as possible (Scott, 2013) but mentions that feedback is difficult with mass education and that many teachers comment that students do not read the feedback.

Papinczak et al. claim that students following a student-centred curriculum should be actively involved in the assessment process because this contributes to learning (Papinczak et al., 2012). The authors of this study tried to engage students in the generation of their own examination questions. This required revision of key learning outcomes, of core subject material, and made students reflect on their learning. Assessment also contributed to the social context because it required collaboration and negotiation between individuals in a small group environment. Development of quality questions for inclusion in written examinations proved to be more difficult and time-

consuming than many students had anticipated but it moderately reduced students' anxiety.

According to Maher (2004), learning about outcomes puts the student at the centre of the learning experience because this puts attention more directly on the activities and achievements of students rather than on the teaching of the curriculum content. On the other hand Brooks et al think that the impact of learning outcomes on students' learning is still relatively unknown (Brooks et al, 2014, 724). The research they made, however, proves that eighty one per cent of respondents agreed (either agreed or strongly agreed) that learning outcomes are useful learning aids, with only approximately 7% disagreeing (Brooks et al, 2014).

Assessment is still an important element of student-centred learning but also among those elements of SCL that have not been developed to either the satisfaction of teachers or students. There are a lot of suggestions how assessment in the student-centred approach should be: flexible, integrative, contextualized, criteria referenced, formative; it should discuss strengths and weaknesses, explain mistakes and give advice on how to improve; be timely, as specific as possible etc. These recommendations are theoretically good but many of them cannot be used in practice when teachers have to assess hundreds of students. Student-generated questions are also most interesting but this kind of assessment seems to cause the same problems – it requires too much time (in this case from students and not from teachers). Everybody seems to have a lot of expectations bu**t it is still not clear how to realize ideal assessment in practice**. This segment of SCL certainly offers further possibilities for improvement.

1.2.4 Limits of student-centred learning

1.2.4.1 Use of SCL in different scientific fields

Student-centred learning is developed in a number of study programmes - very often in different areas of medicine, business, chemistry, physics, mathematics etc. With the Bologna system **SCL entered in the majority of the university programmes** and many of its elements are required by the quality reviews.

Medical education was among the first areas that tried to introduce the student-centred approach. Milanese, Gordon, and Pellatt (2013) discuss the following **learning situations in the field of clinical education** (physiotherapy):

- the student demonstrates patient treatment and the educator facilitates the process
- the student observes another student during clinical practice
- the educator facilitates reflection after a demonstration
- the student completes a patient documentation form
- routine evaluation/treatment of the patient by the student (patient-centred activities)
- a one to one tutorial between educator and student
- the student participates in small group discussion on patient management
- the student is tutored by a fellow student
- the student presents a case study to fellow students and staff (discussion)
- the educator gives verbal feedback about clinical practice
- the educator gives written feedback about clinical practice
- the educator gives immediate feedback
- the educator gives feedback on what the student did well
- the educator gives feedback on the student's limitations
- the educator gives feedback on the student's knowledge
- the educator gives feedback on the student's skill
- the educator gives feedback on the student's attitude (feedback to the student)

- the student assesses him/her self on patient management
- the student is assessed by other students on patient management
- the student is assessed by the patient regarding patient care
- the educator assesses the student using a mock test situation
- the educator assesses the student at the end of the clinical placement (student assessment)
- the student performs role-play activities during clinical placement
- the educator and student plan learning activities for clinical placement together
- the student draws up a SWOT analysis of his/her learning abilities
- the student performs self reflection tasks on clinical abilities
- the student writes a report on patient management, the student makes a poster, evaluates an outcome measure, writes a case report on patient management, writes a report on evidence based physiotherapy on the value of patient statistics and completes a clinical folder for assessment.

The study found out that the most valuable activities for students were individual patient-centred learning activities with adequate discussion and immediate feedback that informed students about their limitations, skills, knowledge and attitude. The worst learning opportunities were those that were not directly related to patient-care.

Nowadays researchers suggest that even the **contemporary military higher education** should introduce a student-centred approach. Rizescu et al (2009) suggest that that also the military high schools should be based on quality assurance, curricular compatibility, competences and conformity with the European labour market, optimal study conditions, materials, modern methods and equipment, student-centred systems, career counselling, student mobility etc. To introduce a student-centred approach universities and colleges should encourage the students, the teachers and the institution as a whole to participate. Teachers in such student-centred learning environment should put emphasis on encouraging students' independent thinking, working on projects, solving practical problems, cooperating in research activities, learning new research methods, stimulating students' imagination, creativity and originality and on eliminating the lack of motivation. Students should be taught how to plan their learning, to interact with teachers, participate

in research and assessment. Teachers' guiding and monitoring should be based upon selection of materials and resources for study and upon the students' interests and capabilities.

These are just two examples of two rather different areas of education: medical and military. SCL in the area of medical education has been known for a very long time while one would not expect that this democratic approach would be recommended also for military education. But the Bologna system of education requires many elements of the student-centred approach so we can expect that student-centred learning will slowly make its way to all the educational areas and to all the universities in EU.

1.2.4.2 Use of SCL in different geographical areas

The opinions about the global applicability of student-centred learning are different. Some authors stress that student-centred learning is a product of Western education systems and that **Asian teachers and students have difficulties accepting, adopting and developing it.**

According to Pham and Renshaw (2013) a number of Asian teachers showed reluctance to accept student-centred learning therefore they tried to empower Asian teachers in adopting a student-centred approach. At first they had a one-day workshop that acquainnted all the teachers with some basic skills to implement student-centred activities. They formed small groups, set tasks and expectations for student behaviours, clarified individual and group responsibilities, monitored both the process and outcomes of the group experience and advised on how teachers should perform their roles in student-centred learning classes. The teachers were also introduced to and instructed in the use of the main student-centred activities:

- Preparing short multiple-choice tests that aim to test the conceptual understanding of the students. The students were asked to work in small groups to complete the tests after each part of the lesson or at the end of each lesson.
- Questioning formulation strategy: Whenever the students worked on the readings they were required to work in small groups. Students helped each other to understand the readings not simply by summarising a set of facts given in the text but also by formulating a set of questions about the text.
- In-class questions: The teachers gave the class a rather general question and asked the students to discuss it with their group members before listening to the answers.
- The students discussed a recent relevant journal article that the teachers had sent to the students to read prior to class with a specific set of questions to answer.
- Case studies: The students read cases from the textbook and then discussed in groups the case using the questions provided.

- Student presentation with class discussion: The students prepared a term paper in groups followed by a class presentation. The students were encouraged to develop a class discussion (20% or 30% of their presentation assessment depended on their class discussion stimulating good questions as well as answers).
- To encourage the students to adopt more active and deeper learning practices, assessment practice was also redesigned. Instead of using only one end-semester assessment, formative assessment practices like short essays and group projects were used.
- The teachers were encouraged to use more complimentary verbal behaviours because this had greater influence on students' participation.

In the Asian context, this type of behaviour could prove even more important because there is evidence showing that Asian students are very much influenced by teachers' appraisals. For instance, Niles, (1995) claims that social praise might be the most potent force that could motivate Asian students to maximise their learning efforts.

Frambach, Driessen, Chan, van der Vleuten (2012) investigated the cross-cultural applicability of Western-origin, problem-based learning and how education contexts and learning approaches differ across cultures. Their research found out that problem-based learning could be applied in different cultural contexts regardless of the cultural differences, challenges and difficulties.

The study of Jocz, Zhai and Tan (2014) investigated if inquiry activities contributed to students' interest in science in the Singaporean context. Questionnaires and focus group interviews showed high interest in science class on the condition that the activities enabled the possibility of applications of science and peer discussion (Jocz et al, 2014).

Manisha et al. claim that not many **medical colleges in India** have incorporated problem-based learning as one of the teaching methods. This could be because of a lack of awareness regarding problem-based learning or negative perceptions about the role of a teacher in problem-based learning. However, in comparison with the traditional lecture

method (Manisha, Aniruddha, Bajaj, 2012) the majority of the students said that project-based learning increased their motivation to participate in class, to attend class and to do well on the course respectively and that project–based learning enhanced their communication skills and their retention of course content. In problem-based covered topics, 68.75% students scored above 75% while in traditional lecture covered topics 44.79% students scored 75%. Average attendance in PBL session was 89.79% while in traditional lectures it was 78.95%.

These data show that the student-centred approach might be foreign to Asian teachers but they can be taught how to accept and introduce it in their institutions. On the other hand Asian students seem to accept and like the student-centred learning.

1.2.4.3 SCL in big classes

There are different opinions about what **big classes** are. In many countries (Slovenia, U.K., Finland etc.) an average lecture will have 20 – 150 students and big classes about 300. But in some countries there are also classes with 1000 and more students in one class.

Some scholars think that it is only possible to introduce student-centred learning in small classes while classes with 100 to 1000 and more students cannot use this. However, Exeter et al. (2010) discuss the teachers' perspectives in very large classes and show that **teaching methods used in small classes can also be used in large ones**. Also in very large classes teachers have to motivate students, prepare a systematic and organised way of teaching and appropriate assessment tasks. In large classes it is more difficult for teachers to interact with students and more difficult for teachers to get to know them personally. Exeter's study shows that teachers (although teaching large classes) used a number of methods which are used also in small classes, such as problem-based learning, small-group discussions and strategies that enable students to ask questions, including individual or small-group based activities, in-class discussions and a well-structured course book. The teachers made the 'key' slides available the evening before each lecture, with space beside each slide for further note-taking. They included in-class quizzes and small-group exercises in lectures in an attempt to deepen the students' learning and introduced an automated feedback system.

Although some relevant authors think that SCL can be used only in small classes, this chapter shows that some find it quite possible and acceptable to use SCL also in big classes.

1.2.5 Teachers' and students' acquaintance with student-centred learning

Student-centred learning has been in use for a long time but its influence should become stronger after the introduction of the Bologna system. However, it does not seem that all the teachers and students are acquainted with student-centred learning. They seem to know some terms like active participation in studies, they might know certain models like problem-based or project-based learning but not all the participants of education are aware that these elements belong to SCL.

New **university teachers** have some troubles with student-centred learning (Plush, 2014, 3). At the beginning of their career, academics have very little experience, especially if they are employed more as experts than pedagogues. In many countries university lecturers have no formal teacher training, no examinations, and, consequently, no academic qualifications in the field – unlike teachers in other sectors. Very often, young university teachers receive no training as regards the pedagogical approaches, teaching strategies, practical instructions, and the availability of learning technologies.

Besides being acquainted with pedagogical approaches, teaching strategies etc. university teachers should also believe in these approaches and especially in SCL. Jacobs et al. (2012) found the attitude of the teachers toward SCL so important that they even developed an instrument to measure concepts about learning and teaching in student-centred medical education (because several authors have noted that teachers' beliefs influence their teaching approaches).

In the literature there are **just a couple of cases when students speak about student-centred learning**. Lea, Stephenson and Troy (2003) describe research which investigated the students' opinions and knowledge about student-centred learning. Although the students who participated in the research claimed that they were unfamiliar with the term, they came up with various ideas about what student-centred approach might mean. Students expected that student-centred teaching activities would be active, interactive,

contain group work, creative in nature, offer flexibility in the choice of modules, ensure continuous qualitative feedback, that students should have a say in learning outcomes, there should be respect for students, that students would be treated as adults and be given greater responsibility, that it would be an empowering process, more motivating and include constructive feedback. Students expected that their learning might be easier if they had a better timetable, more personal motivation, less anxiety before examinations, more guidance from lecturers, if lecturers were not so unapproachable, if there was more flexibility in module selection, more flexibility in relation to students' work, and improved access to resources etc.

It seems that lecturers as well as students would need further training in SCL. Young lecturers who are starting with their pedagogical career certainly need knowledge about the student-centred approach. But it would be necessary that all the teachers accepted the student-centred approach and believed in it because teachers' beliefs influence their teaching. On the other side students are even less acquainted with student-centred approach. It would be useful that also students learn some more about SCL and realize that they can expect from universities much more than they get at present.

1.2.6 Pros and cons for future development of student-centred learning

The above-mentioned authors show that student-centred learning, or at least aspects of it, has become an important part of the university education in countries that emphasise the role of student-centred learning and that accepted the **Bologna system**.

Hocking (2009) mentions a number of studies (Lonka & Ahola, 1995; Hall & Sanders, 1997; Cannon & Newble, 2000; Honkimaki et al., 2004 in Hockings, 2009) that have shown that student-centred learning **encourages deep learning** that is associated with searching for meaning in the task and the integration of task aspects into a whole (Beausaert et al., 2013, 2).

On the other side there are studies (Herington, Weaven, 2008) that explored how more student-centred teaching methods encouraged deeper student learning and self-regulated learning behaviours but found out that whilst the project motivated the students' participation in the classroom it did not prove that any deeper learning style had been achieved.

There are also some studies proving that **student-centred learning was ineffective for around 30 %** of students (Hockings, 2009; Honkimaki et al., 2004). Hockings has not discovered why this is so nor how to help students whose learning remains ineffective in spite of the advantages of a student-centred approach.

The most frequent problems for teachers using a student-centred approach seem to be that students expect model answers, students are often too passive, a lack of motivation for learning and a reluctance to engage in discussion and activities.

Blackie, Case, and Jawitz (2010) claim that student-centred learning creates **a link that can transform students and teachers**. Student-centred teaching is not just a different style of teaching. This approach requires that the teachers really understand and pay attention to the students and their learning (Blackie et al, 2010, 638), that teachers use

Rogers' optimistic view of the potential of any human being, to tend towards psychological health and maturity, that teachers should have congruence, unconditional positive regard and empathy and thus help to develop a deeply human relationship between student and teacher. This is similar to the findings of Barnett (2008, 170) who concluded that the process of higher education should be more than increasing skills and knowledge, that there should be fundamental growth in the student. This idea is further developed by Sarah Mann (2008, 141) who emphasizes **the student is a valued human being,** that teachers should treat the students with respect and actively guide students in finding their own way of higher education. Mann, however, does not develop the idea about what a university could do to encourage teachers to practice this ideal.

Blackie et al suggest an academic staff development programme that will introduce the idea of student-centredness in higher education. Teachers and lecturers should work on increasing their own and their students' sense of value and self-esteem and begin to believe that it is possible to change (Blackie et al, 2010, 645).

Kember (2009) says that many university teachers consider that they are experts who should provide content-oriented teaching causing them to be reluctant to change their lectures to include active student engagement. According to Kember it is necessary to improve the quality of teaching and learning by encouraging teachers to adopt student-centred methods of teaching. Kember (2008) describes an initiative to promote student-centred teaching and learning. The campaign included an analysis of good practice by award-winning teachers, promoted wider use of good practice, a teacher training course which encouraged student-centred learning, projects etc.

Although this chapter mentions not just positive but also critical opinions about student-centred learning, SC strategies still have so many advantages that it is quite impossible not to expect further development of SCL. Even if some scholars doubt that SCL encourages deeper learning, although SCL is not effective for some students and some students do not like this way of learning, the student-centred approach represents a link that can create better relationships and transform students and teachers.

1.3 THE TEACHER'S ROLE IN UNIVERSITY STUDENT-CENTRED STUDIES

1.3.1 Introduction

The third part of this literature overview analyses the Bologna Process documents and scientific literature and **identifies the essential criteria for assessing a teacher's role in student-centred learning**. The research findings reveal the importance of the teacher's role in striving for quality in higher education, that a shift in the teaching and learning paradigm whilst time consuming, provides opportunities for the teacher to change his/her work style as well as to develop professionally.

The gradual shift from the traditional study and content-based, constructivist theories represented by Dewey and Vygotsky to student-centred learning was observed with the change in higher education trends caused by the agreement to create the single European Higher Education Area. The documents of the Bologna process (London Communicate, 2007; Leuven Communicate, 2009; Budapest-Vienna Communicate, 2010; Bucharest Communicate, 2012) which state that European higher education has to be based on the study outcomes and European Credit Transfer and Accumulation System (hereinafter ECTS) revealed the status and importance given to student-centred learning.

Analysis of the documents and scientific literature was carried out by applying logical induction methods. It allowed identification of the typical characteristics the systematisation and classification of which led to a formulation of criteria for assessing teacher's roles in the context of student-centred studies. The survey analysed the teacher's roles in the context of student-centred studies carried out by the authors from different parts of the world. The positive effects of the "pure" student-centred approach have been proved in a number of case-studies and are well-documented in the literature: O'Neill and McMahon, 2014; Armstrong, 2012, Paterson, 2007; Rogers 1983; Baxter, 2001; Chase, 2001; Hannafin, 2010; Gamboa, 2001; Šumskaitė, 2014; Tamelis, 2014;

Sajienė, 2012, Ruškus 2007; Kardelis and others, 2008; Tūtlys, 2010; Pukelis, 2011; Pileičikienė, 2011 et al.

The changing trends in higher education were analysed, the paradigm of student-centred learning discussed and an analysis of the teachers' experience in an international context was carried out in this study in order to implement the intended aims and objectives.

1.3.2 Trends in higher education

The force behind the advocation of the Bologna Process was the Sorbonne Declaration signed in 1998 by the Ministers of Education of France, the UK and Germany. The focus was on the essential principles guiding the creation of the Single European Education.
In 1999 in Bologna, the Ministers of Education from 29 countries signed the Bologna Declaration European Higher Education Area (EHEA) which highlighted the main aims of the EHEA up until the year 2010 and introduces the main principles of compatibility, comparability, competitiveness and attractiveness.

The Prague Communicate (2001) highlighted the life-long learning principle and emphasised the importance of the measures for increasing the attractiveness of the European Education Area.

The main aims of the Berlin Communicate (2003) were quality assurance at the institutional, national and European levels and the introduction of the two-level study cycle system to guarantee accreditation of both different study levels and study periods.

The Bergen Communicate (2005) had forseen the need to consider other aspects such as improving students' access to higher education, the need to eliminate obstacles surrounding student mobility, the need to implement quality assurance measures and guidelines (ENQA), the introduction of flexible study forms and the fostering of accreditation of prior learning.

The following aims were formulated in the London Communicate (2007) – European Quality Assurance Register for Higher Education. The aims, to be achieved by 2010, were to develop a national qualification framework linked to the qualification framework of EHEA; develop national strategies and action plans for dealing with the social aspects of higher education and to approve EHEA global scale development strategy.

The main aims highlighted in the Leuven and New Leuven Communicate (2009) emphasised the need to increase the numbers of students and more active representation of marginalised groups, to state that more than 20 % of the study time was spent in other country, that study programmes should be reorganised to reflect the shift towards student-centred learning and that improving attitudes to life-long learning and increasing employability were important duties of higher education institutions.

The Budapest – Vienna Communicate (2010) marked the opening of the Common European Education Area. The importance of higher education in the sustainable development of the economy and the creation of employment places in the aftermath of the economic crisis is highlighted in the Bucharest Communicate (2012) where it wass agreed that cooperation is key in providing quality higher education for all, improving employability and encouraging academic mobility.

The Tuning methodology is based on agreements in creating topical networks and principles pertaining to trust and the willingness to develop. It was expected that implementation of the ECTS would foster students' mobility and accreditation of certificates and qualifications.

It is fair to state that the EHEA provides possibilities for a student to become an active participant in the study process because he/she is responsible for the study results and is able to choose his/her study program as well as to make decisions about participation in different mobility programs. However, both at the international and national (as well as institutional) level it is necessary to plan high-quality studies that are available to all in higher education. At the institutional level, a student support system including consulting and information services providing flexibility in learning environment and alternative methods for improving accessibility to higher education should be developed. The focus has to be put on the development of such study programmes that allows the graduates to acquire and develop innovation, entrepreneurship and scientific research skills. With the recent change in the education paradigm where the focus is put on the students' independent learning, the role of the teacher remains very important: a special emphasis

is put on the teacher's personality, his/her pedagogical and scientific activities, professional skills as well as self-development. As the result of this, the teacher should be encouraged to apply innovative methods that make the student an active participant in the study process, encourage students to participate in the international mobility programs, projects, professional organisations and other beneficial activities deemed appropriate.

1.3.3 The concept of student-centred studies and the changing roles of teachers and students

Higher education is an essential and integral part of the lifelong learning process. Application of the individualised modular study system means that people of different ages can access a university education. A flexible and adequate system for the approval of the education acquired in other universities, prior learning, and professional experience are in place. Partial and continuing studies are foreseen for synthesising/uniting interdisciplinary and experiential knowledge as well as making innovative practical decisions. Higher education institutions operate as lifelong learning centres making a huge impact on the development of the society, economy and culture (Mosta, 2015).

In traditional education system the essential elements of the study program were knowledge and teaching process. ECTS (European credit transfer and accumulation system) is a means to develop, describe and execute study programs as well as award competences of higher education. ECTS is a student-centred credit accumulation and transfer system based on clear study outcomes and a clear learning process. It aims to make the planning process of qualifications and learning units, execution of teaching and learning, assessment, accreditation and validation of the outcomes as well as students' mobility easier. ECTS is a student-centred system because it helps an education institution focus on the learner's needs and expectations, which are not seen as essential elements in traditional teacher-oriented system. These are student-centred studies. A student's contribution to the teaching will be reflected in what he/she will take out. This new system provides more freedom for the teachers as well (Šumskaitė, 2012).

The study process is characterised by widely applied interdisciplinary and multidisciplinary approach and active individualised learning methods. Experiential learning culture bridging theoretical studies with practical activities and real life projects in the public and private sectors is common. A significant part of studies is organised in virtual learning communities. A person with a university education is able to synthesise

competences from several different areas, create new knowledge, study independently and teach others in multicultural environments (Mosta, 2015).

Student-centred studies are characterised by changes in the study program and schedule, content of the subjects and interactivity. The education system is focused on the learners' needs not on the needs of others (teachers, administrators etc.). In this study process, the teacher's role is that of the facilitator so the focus is put on the student; students take responsibility for the study process; the teacher creates study situations for the students' active participation (Tamelis, 2014).

The term student–centred learning (SCL) is widely used in teaching and learning literature. Many terms have been linked with student–centred learning, such as flexible learning (Taylor, 2000), experiential learning (Burnard, 1999) and self-directed learning and therefore the slightly overused term 'student–centred learning' can mean different things to different people. In addition, how SCL is practiced also varies and this has led to confusion surrounding its implementation.

The implementation of the student-centred paradigm is directly linked to systemic changes at all levels of the study content: recommended, written, taught, checked, supportive and hidden. The change at written study content level is identified by the reformulation of the study programmes based on the logics of the study outcomes; at the teaching level it is described by active study methods, including a greater emphasis on independent studies. At the evaluation level of the study content – the assessment is based on the achievement level of the study outcomes; the supportive level guarantees the creation of an environment in higher education institutions needed for the achievement of the intended study outcomes. Whilst implementing student-centred studies at the supportive level, significant attention is paid to the development of the student support system. The change at the hidden level is focussed on the development of the values, beliefs and attitudes and, because of that, is the one slowest to change (Sajienė & Tamulienė, 2012).

Student-centred learning, also known as learner-centred education, broadly encompasses methods of teaching that shift the focus of instruction from the teacher to the student. In original usage, student-centred learning aims to develop learner autonomy and independence (Jones, 2007) by putting responsibility for the learning path in the hands of students (Rogers, 1983; Pedersen & Liu, 2003). Student-centred instruction focuses on skills and practices that enable lifelong learning and independent problem-solving (Young & Paterson, 2007). Student-centred learning theory and practice are based on the constructivist learning theory that emphasizes the learner's critical role in constructing meaning from new information and prior experience.

The student-centred approach is based on the hypothesis that students who are given the freedom to explore areas based on their personal interests, and who are accompanied in their striving for solutions by a supportive, understanding facilitator not only achieve higher academic results but also experience an increase in personal values, such as flexibility, self-confidence and social skills. This approach, also known as experiential learning, requires specific personal attitudes on the side of the instructor who takes over the role of a facilitator. These attitudes are highly transparent: open communication, positive regard towards students and the seeking for deep understanding (Rogers, 1983).

Student-centred learning puts students' interests first, acknowledging student voice as central to the learning experience. In a student-centred classroom, students choose what they will learn, how they will learn, and how they will assess their own learning (Hannafin, 2010). This is in contrast to traditional education, also dubbed "teacher-centred learning", which situates the teacher as the primarily "active" role while students take a more "passive", receptive role. In a teacher-centred classroom, teachers choose what the students will learn, how the students will learn, and how the students will be assessed on their learning. In contrast, student-centred learning requires students to be active, responsible participants in their own learning and with their own pace of learning (Johnson, 2013).

Student-centred learning means inverting the traditional teacher-centred understanding of the learning process and putting students at the centre of the learning process. In the teacher-centred classroom, teachers are the primary source for knowledge. On the other hand, in student-centred classrooms, active learning is strongly encouraged. Armstrong (2012) claimed that "traditional education ignores or suppresses learner responsibility" (Armstrong, 2012).

Usage of the term "student-centred learning" may also simply refer to educational mindsets or instructional methods that recognize individual differences in learners (Student-Centered…, 2014). In this sense, student-centred learning emphasizes each student's interests, abilities, and learning styles, placing the teacher as a facilitator of learning for individuals rather than for the class as a whole.

The student-centred approach is based on the empirically proved hypothesis (Aspy, 1972) that students achieve superior academic results and even personal growth in terms of higher self-confidence, openness to experience, etc. if they learn in an atmosphere or climate that can be characterized by three basic attitudinal conditions: realness, acceptance, and empathic understanding. These necessary and sufficient conditions must be held or lived by the instructor, better facilitator, and reciprocally be perceived by the students.

- Realness, genuineness, or transparency in the facilitator means that he or she must be real in the relationship with student, be the person he/she is and not use any masks of facades in communicating with the students.
- Acceptance, prizing, or respect towards students implies that the facilitator accepts and respects the whole personality of the student and feels basic trust in his or her constructive tendency, his/her striving for solutions in his/her own way.
- Deep understanding, often called empathic understanding, means that the facilitator actively listens to the students with the ultimate goal to profoundly understand their questions, motivations, intentions, and the meanings of their communication as well as solutions (Aspy, 1972).

There dominates the opinion that students are a separate society group with the individual needs and problems. Of course, there are common students uniting problems, but we have to understand that the students' community is the reflection of the society: they have different experience, believes, attitudes, wishes, they face different problems and are interested in different things. One of the main student-centred study principles is the understanding that students are different and because of that their needs and expectations are different as well. It is very important to remember that every single person has had unique experiences, different upbringing, is interested in various things and because of that their world outlook is not identical. Very often people approach the same things in a different way, plan their future differently. Even when studying the same subject or module, students tend to see different perspectives. The same as in the science where very often it is impossible to find one right answer, the students have their own opinion, support one or other author, are willing to study more carefully one specific chosen scientific field area. It is crucial to remember the importance of the methodological support because of all other things students have individual learning styles. For some students it is easier to acquire written information; others prefer visual aids; some require audio or sensory information. Some students choose to study individually; others prefer small group discussions and etc. It means that a teacher meets a lot of difficulties when trying to transfer his/her message in an effective and clear way. Advantages of information technologies cannot be forgotten as well. Seeking to create effective learning implementation situations "in any place at any time", it is necessary to 'untie' part of the information from the teacher and provide a student with the possibility to acquire it in other ways i.e., in the form of audio lectures or e-books (Peilakauskaitė & Varanauskas, 2011).

In summary, student-centred teaching requires particular personal attitudes from the facilitator and at least a certain degree of openness from the side of the curriculum as well as the students. From personal experience we'd like to add the requirement on, or at least the benefit of social skills and techniques such as moderation. These help to make group processes more transparent, to converge faster and hence to improve student satisfaction.

1.3.4 Comparison with other didactic methods

We live in the time of a fundamental social and economic shift from an era of mass-production to a new period characterized by the personalization and customization of products and services (Keeley, 2007). In order to survive in a changing world, the advanced economies need to adapt to this new reality not only in the domain of business but also in other ones including education. Most contemporary public education systems are still based on the 'one size fits all', full-time classroom-based model. It is believed to effectively serve all learners, or at least to provide them with the best education our society is able to offer in current economic and social circumstances. However, this single model approach does not allow many students to achieve their best possible learning results. This situation can be dramatically improved by transition to a new education paradigm characterized by greater flexibility and choice options for each individual student. So, the idea of personalization in education in general is very simple: to enable teachers to match what is taught and how it is taught with the needs of each individual schoolchild, student or adult learner (Personalized Learning …, 2012).

The idea of personalization of education can be traced back to the XIX century, when Helen Parkhurst created the Dalton Plan stating that each student can program his or her curriculum in order to meet his or her needs, interests and abilities; to promote both independence and dependability; to enhance the student's social skills and sense of responsibility toward others. The idea of customization and personalization of education has evolved ever since. In the 1970s, Victor Garcìa Hoz was the first to coin the term of 'personalization' in the context of educational science (Anderson, 2014).

S. Warring (2010) states that independent learning is a process, during which learners are able to acquire knowledge, independently analyze and critically evaluate. The author identifies the following levels of independent learning:

- the first level: is not able and does not want (dominant features are poor abilities, low motivation, low self-confidence, unwillingness to take responsibility);

- the second level: is not able but wants (dominant features are poor abilities, high motivation, high self-confidence);
- the third level: is able but does not want (dominant features are good abilities, low motivation, low self-confidence; both a teacher and a student are seen to be responsible);
- the fourth level: is able and wants (dominant features are rich abilities, high motivation, taking responsibility for the study outcomes) (Warring, 2010).

The content analysis of the answers to the open questions was the basis for identifying the threats to the independent learning:

- technical which are related to poor ability to perform tasks using software as well as poor knowledge of math and physics:
- psychological and social threats which are reflected in poor communication and cooperation skills, low self-responsibility level, low motivation and other personal qualities;
- the drawbacks of the study process which are related to the too fast pace of the lectures and practical classes and improper preparation of the self-study assignments (Baužienė et al., 2013).

Differentiating the process within a lesson refers to how the learners come to understand and assimilate facts, concepts, or skills. In traditional lesson planning, the process is the guided and independent practice within a lesson. Despite differences in abilities, learning styles, and students' prior knowledge, this component of a lesson is typically a stable constant in most instructional lessons, meaning that all students complete the same type and amount of practice (Anderson, 2014).

Every didactic method builds upon a theory of learning. Currently, individual approaches tend to be categorized under three mainstreams (Holzinger, 2002):

Behaviourism deals with perceptible data and excludes ideas, emotions, and inner experience. Learning is seen as a pure stimulus-reaction mechanism being based on conditioning. Although pure behaviourism is often criticized, its various forms still prove

effective for the acquisition of factual knowledge. This applies despite the fact that human beings play the role of passive "knowledge receptacles" (Skinner, 1974).

Cognitivism refers to the study of the mind and how it obtains, processes, and stores information (Stavredes, 2011). This theory was a response to behaviourism. It was argued that not all learning occurs through shaping and changing of behaviours. In this theory, learners are active participants in their learning, and the mind functions like a computer processor. Information comes in as input, the mind processes the information for the time being, and the information is stored away to be retrieved later (Learning…, 2011(b)). Learning is shaped by acquired learning strategies and prior knowledge and attitudes, called schemas. The cognitive view of learning is teacher-centred, and information must be presented in an organized manner in order to achieve the most efficient learning.

Constructivism is the study of a learner's own construction of knowledge (Learning…, 2011(c)). This knowledge is constructed through one's own personal experiences and interactions with the outside world. The learner takes in new information and gives meaning to it using his or her own prior attitudes, beliefs, and experiences as references (Stavredes, 2011). Learners are active participants in the construction of knowledge while the instructor serves as a facilitator. Two types of constructivism emerged beginning in the late 1970s. Lev Vygotsky introduced social constructivism, in which social interaction with others helps the learner put meaning to information.

Student-centred teaching shares with constructivist approaches the theory that knowledge is constructed as the result of problem solving in an authentic, situated environment. Also, interaction is central to the process of problem solving that calls for understanding a complex situation in its entirety. Yet, student-centred teaching is less directed than constructivist approaches. The instructor role is taken over by a facilitator who accompanies rather than leads or coaches students in their personal learning (Holzinger, 1997). Emphasis thereby is on interpersonal values – how can I be supportive here and now – and on providing a climate of trust and openness that can be used for whole-person learning, involving cognition and feeling, mind and heart of every individual. It is

precisely this acceptant climate and balance of cognition and emotion that is made responsible for their synergetic effects leading to deeper, life-long learning experiences (Rogers, 1983). This phenomenon has also been observed by Roger Schank and expressed in one of his popular phrases as: “We learn best what we feel most” (Schank, 1995).

Empowering education should produce self-directed, lifelong learners, but sometimes it creates dependency instead. Based on the Situational Leadership model of Hersey and Blanchard (Hersey & Blanchard, 2012), the Staged Self-Directed Learning Model proposes that learners advance through stages of increasing self-direction and that teachers can help or hinder that development. Good teaching matches the learner's stage of self-direction and helps the learner advance toward greater self-direction. Specific methods are proposed for teaching students at each stage, although many different teaching styles are good when appropriately applied. Several pedagogical difficulties are explained as mismatches between teacher style and learner stage, especially the mismatch between a student needing direction and a non-directive teacher (Grow, 1991).

“A student-centred study programs as an opposition to a teacher-centred study programs…” – discussions of this kind reflect different approach towards teaching and learning. All education systems can be described as oriented more towards a teacher or a student. A teacher-centred approach usually does not pay attention to the time factor; it is based on the attitude that a teacher defines appropriate study objectives highlighting what a student has to learn. A student-centred approach focuses on the structure of the whole study program and especially on how it may help the graduate to find the place in the society. Not so long ago almost all of the existing education systems were teacher oriented. Nowadays more attention is paid to overcoming obstacles which are very common among the students when during the study period they seek to acquire competences necessary for future professional activity. It is agreed that the scope of the student’s learning is a very important factor; educators agree that there is some tension between what a student would have to learn and what a student is able to learn during certain period of time. When identifying the number of credits which are needed for

acquiring certain competences and requirements of the study program, it is very important to bear in mind that prior knowledge, skills and competences of the students may be different. Because of these preconceived factors based on the difference in the structure and content of secondary education, different attitudes are observed in different countries (Masiliauskienė et al., 2011). Differentiated instruction is a way of recognizing and teaching according to different student talents and learning styles…Carol Ann Tomlinson (2010), one of the leading researchers on differentiated instruction, discusses that, in addition to providing effective teaching to all students, differentiated instruction and its subset, personalized instruction, are particularly useful for pupils who do not fit the mould. For these students she recommends three strategies when implementing this approach of teaching that can make it very powerful - emphasizing students' interest, using the right starting point, and allowing students to work at their own pace.

An important strategy for differentiating instruction in the twenty-first century that will likely benefit students greatly involves the effective implementation of technology. Since today's students tend to be more engaged while using technology and may find traditional approaches less motivating, teaching effectively with digital resources should help teachers instruct in a manner that matches the learning styles of their students (Morgan, 2014).

Differentiation is a way of teaching; it's not a program or package of worksheets. It asks teachers to know their students well so they can provide each one with experiences and tasks that will improve learning. As Carol Ann Tomlinson has said, differentiation means giving students multiple options for taking in information (1999). Differentiating instruction means that you observe and understand the differences and similarities among students and use this information to plan instruction. Here is a list of some key principles that form the foundation of differentiating instruction.

1.3.5 Teacher's role in student-centred studies

The following Lithuanian researchers have analysed the role of the teacher in the context of the student-centred studies: Šumskaitė, 2014; Tamelis, 2014; Sajienė, 2012, Ruškus 2007; Kardelis and ect, 2008;. Tūtlys, 2010; Pukelis, 2011; Pileičikienė, 2011 etc.

The research Students' Approach towards the Improvements in the Higher Education System was carried out in Lithuania in 2008 (Galkutė, 2008). 992 respondents (60 % of the academic university students and 40 % of the applied university students) participated in it. The research findings revealed that the key players in creating study quality improvement conditions are teachers. The following requirements for them were identified:

- ability to construct a study process oriented towards development of the students' competences;
- create conditions for students' personal development;
- apply appropriate methods for the assessment of the study results (from the students' point of view, formative assessment is very important);
- pay special attention to the development of the students' creativity.

The development of information and communication technologies has created the possibility of acquiring an education from distance. Distance learning is a mode of delivering education and instruction, often on an individual basis, to students who are not physically present in traditional setting such as a classroom. Distance learning provides access to learning when the source of information and learners are separated by time and distance or both. In 2012, (Šorienė, 2012) a research entitled Distant Learning: the Way to Expand Learning Opportunities was carried out. Its results revealed the challenges that educators have to deal with e.g. quality assurance and development of the valid system for assessment and assurance of the distant learning quality. However, organisation, preparation of the teaching and learning materials and delivery of distant learning activities results in the workload of the teachers, tutors of the practical trainings and administrative staff.

When introducing the research Factors Influencing Studies of the Persons with the Special Needs in Higher Education Institutions, J. Ruškus and others (2007) draw attention to the fact that the presence of students with special needs in higher education institutions encourages a change in both the teachers and students' values and attitudes and at the same time initiates reflection and real changes focused on individualisation of studies. As a result, both administration and teachers are forced to look for individualised study forms. Such changes may be a starting point for new individualised approach towards methodology of preparation of the study programmes and organisation of the study process. However, specific knowledge and skills are required from the teacher in such situation.

In 2008, the results of the survey The Approach of the Lecturers of the Lithuanian Higher University Education Institutions towards Psychosocial Academic Work Conditions were presented by G. J. Rastauskienė et al. This research focussed on the analysis of the lecturers' opinions about being part of an academic community as well as the expression and evidence of the psychological conditions of it. On the basis of the research findings, it is possible to state that the lecturers of the Lithuanian higher education institutions were positive when assessing opportunities for pedagogical and scientific activities as well as interpersonal relationships and as the result are happy to be the part of this academic community. The research findings revealed the fact that the positive emotional expression (being proud of the organisation) of the teaching staff of the higher university education institutions is directly linked to changes in the field of higher education as well as the teacher's pedagogical and scientific work experience. Solution of the higher education problems is directly linked to the psychosocial factors that influence the teacher's performance. They are important for the teacher's scientific activities, study quality and relationship of the higher science with the society. The expression of the factor of performance opportunities is determined by the science field a teacher represents; expression of emotional safety is reflected in the change of the higher education, duration of the teacher's scientific work experience as well as the represented scientific area. It was clarified, that the teachers with the lower subjective safety level give a higher score

when assessing students. When seeking for the improvement of the quality of studies, it is very important to evaluate the subjective emotions of a teacher as a member of the academic community related to the possibility of the implementation of pedagogical and scientific activities. The research findings revealed that younger teachers looking for the result oriented activities experience higher level of safety; the older ones who seek just to approve their status do not feel so safe.

V. Tūtlys (2010) states that one of the most important aims of the ECTS is to contribute to the creation of the EHEA through guaranteeing the independent and effective mobility of the learners within the EU countries. The author revealed the problem related to different interpretation and usage of the ECTS across the EU countries. He pointed out some mismatches of the ECTS application observed in different education institutions within one country or even within departments of one institution. V. Tūtlys (2010) paid attention to the fact that the current demographic trends, the process of ageing society and headhunting of talented people in the international market of human resources can significantly increase the competition among European higher education institutions fighting for the recruitment of the new students and academic staff. These factors, as the author states, encourage to look for the different ways how to increase the accessibility of the studies and emphasise the importance of student-centred studies as well as flexible study methods; in all study fields, the emphasis is put on the study outcomes, employability, increase of the students mobility, improvement of the study quality and internationalization of studies. When shifting to the student-centred studies, Lithuania as well as most European countries must deal with the teacher workload related difficulties. This process looks for more creative approach towards and application of innovative teaching methods. It is noticed that the main problems are related to teacher motivation when reviewing and evaluating programmes.

K. Pukelis (2011) emphasised importance of compatibility of study aims with the study outcomes because it is necessary to evaluate the scope of the credits foreseen in the different study cycle study programs. It is stated that quite often "...a too ambitious study aim and consequently study outcome as well as assessment criteria for its achievement

are formulated... (p. 67) that does not correspond to the amount of the student's independent work hours planned in the program. Attention is paid to the fact that when developing study programs, it is necessary to decide which hours – academic or astronomic – will be used for measuring student's independent work time. The concept of 'a typical student' (it includes student's abilities, skills and other personal qualities) is also highlighted because it is very important when estimating the independent study workload which is needed for the achievement of the foreseen study results. It is necessary to point out the diversity of the preparation level and personal characteristics of the new entrants. The author pays attention to the fact that the development and renewal of the study programs is a complicated process that requires didactic knowledge the teachers have to possess; it is based on teamwork of teachers and social stakeholders, involvement of the international partners as well as supporting organisational culture of higher education institution.

N. Pileičikienė (2011) emphasises the importance of the social stakeholders (students, teachers, graduates, employers, ect.) networks participating in the quality assurance of the study programs. In this situation, teachers are responsible for identifying study outcomes of the study programs; they are responsible for considering such study program development aspects as the purpose of higher education, international experience in the field of higher studies, formulation of the study outcomes and the compatibility of the elements and infrastructure of the study program with the study outcomes. It means that the teacher is responsible for all stages of the study quality assurance. Graduates and employers take the part of responsibility. They participate in the identification of the study results but are not responsible for their formulation or compatibility with other study program content or infrastructure related components. Apart from that, employers are responsible for providing appropriate skill development conditions during practical trainings as well as reasoned final assessment of the study results. The active part in the cooperation of the stakeholders should be teachers but they face different problems such as lack of cooperation traditions, shortage of the teachers' competence when identifying employers' functions, insufficient financial resources.

The key roles of the teachers – a scientist and a lecturer who is an information provider – were identified on the basis of the discussion focused on the results of the students' experience (Tijūnelienė, 2012). The research findings revealed that the main function of the teacher is to strive for career and be an authority for students because it increases students' motivation and interest to study the subject. One of the requirements imposed on the teacher is diverse professional development, i.e. showing interest in recent research findings not only in the area of interest but in other fields as well. The teacher's ability to create such teaching and learning environment that can be characterised by the low level of tension and positive emotions is also very important.

With the shift in the teaching and learning paradigm, the teacher's ability to take care about own professional growth and to create as well as to apply innovative teaching methods needed for the development of the students competences becomes very important. The teachers' opinion about the main abilities needed for being successful in their profession expressed in the scale of 10 points is as follows:

• holistic thinking and practice (integration of the different subjects, cultures and the points of view at the same time taking into account local and global perspectives) – 9,26;

• strategic thinking (ability to foresee different future alternatives as well as their implementation possibilities based on the critical analysis and understanding of the past and current situations) – 9,17;

• implementation of changes and innovations (teacher's role, teaching and learning methods, organization of studies and changes in the study system) – 8,95 (Chmieliauskas et al., 2012).

When summing up experience of the Lithuanian researchers, the following critical aspects can be identified: a certain level of the didactic knowledge has to be demonstrated by teachers when shifting to the SCL; teacher – stakeholder teamwork and involvement of the international partners as well as appropriate organisational culture are needed to support this transformation process; during the study process, the teacher's roles are realised through organisation of the teaching and learning process, preparation of the teaching and learning materials, provision of distant learning possibilities, participation in

scientific activities. It results in the increased workload of the teacher. The teacher's professional performance is also conditioned by psycho sociological aspects which are important both for the teacher's scientific activities as well as study quality and the relation between higher education institutions and society.

The following foreign researchers analysed the teacher's role in the student centred learning context: ONeill and Mcmahon, 2014; Armstrong, 2011; 2012, Brown, 2011; Scott, Curaj, 2012, Hannafin, 2010; and others.

The most important role in the student-centred learning belongs to the student and the teacher as a scientist. In such case, students' criteria for evaluating him/her are based on their needs. This is a person who has a calling for the job he/she is doing, who likes the subject being taught, who is on extending knowledge in the field, cherishing its theories, properly performing his/her duties. Students have no doubt that a teacher has to be a scientist demonstrating the top level of professionalism (Butler-Kisber, 2012).

Students are the centre of the educational enterprise, and their cognitive and affective learning experiences should guide all decisions as to what is done and how. Most of the learning activities for the class are traditionally carried out by the teacher: choosing and organizing the content, interpreting and applying the concepts, and evaluating student learning, while the students' efforts are focused on recording the information (Brown Wright, 2011). Empowered learners are more motivated to perform classroom tasks, and they feel more competent in the classroom, find the required tasks more meaningful, and feel they have an impact on their learning process. Empowerment is primarily influenced by teacher behaviour, which is not consistent with contemporary research on achievement motivation. In learning process also is very important the role of student characteristics (temperament and learner orientation) on empowerment along with the impact of instructor communication behaviour (nonverbal immediacy and clarity). Interpretation of results via the motivation model revealed teacher clarity to be the primary predictor of student empowerment and learning. Student temperament and learner orientation had little impact on empowerment (Houser & Bainbridge Frymier, 2009).

In recent years, researchers on learning have focused on learning with multimodal representation and this research has shown that when learners can interact with an appropriate representation their performance is enhanced (Yeşildağ Hasançeb & Günel, 2013).

Nearly all universities use student evaluations of teachers (SETs). For example, they are used by over 99% of business schools (Clayson, 2009). It is assumed that students understand how they learn, that the feedback will help to select those teachers best able to help students, that happy students are good learners, and that the feedback will lead teachers to improve. It is difficult to find evidence to support any of these assumptions (Armstrong, 2012).

A well-organized teacher-centred computer science context can provide students with proper cognitive, emotional, and social support. Teacher-centred instruction plays a critical role in helping computer science learners acquiring fundamental knowledge, and affects how they perceive learning computer science. Computer science teachers are experts who transmit their well-rounded knowledge to learners and determine the classroom procedure, which is an indication of authority and convention (Ling & Lian, 2013).

At the teacher's level, greater involvement with students provides for a successful student–centred learning approach. Where students are motivated to come to an understanding of, and engage with, the material with which they are presented, they are more likely to adopt strategies that will lead to deeper levels of learning. The teaching and learning methods used by teachers are also particular in the student–centred learning approach (Curaj & Scott, 2012).

The intentions of a teacher and students should be similar in the process of teaching-learning. It is not wrong to meet the objectives by following a fair method be it a teacher-centred or student-centred learning. These two methods, with a limited number of

challenges, are always handy in meeting the objectives of teaching and learning. Teacher is instrumental in any method what can realize the dreams of students. Teacher cannot do anything without the cooperation of the students in the classroom (Nagaraju et al., 2014).

Student–centred learning, despite its popularity, is not without its critics. The main critique of student–centred learning is its focus on the individual learner. In addition, there are some difficulties in its implementation, i.e. the resources needed to implement it, the belief system of the students and staff, and students' lack of familiarity with the term (O'Neill & McMahon, 2014).

Simon (1999) describes that student–centred learning, in the school system, can be in danger of focusing completely on the individual learner and taken to its extreme does not take into account the needs of the whole class. Simon highlights the point that 'if each child is unique, and each requires a specific pedagogical approach appropriate to him or her and to no other, the construction of an all-embracing pedagogy or general principles of teaching become impossibility'(Simon, 1999).

Learning is often presented in this dualism of either student–centred learning or teacher–centred learning. In the reality of practice the situation is less black and white. It appears from the literature some view student–centred learning as: the concept of the student's choice in their education; others see it as the being about the student doing more than the lecturer (active versus passive learning); while others have a much broader definition which includes both of these concepts but, in addition, describes the shift in the power relationship between the student and the teacher (O'Neill & McMahon, 2014).

Education can either develop or stifle students' inclination to ask why and to learn. If the students' task is to memorize rules and existing knowledge, without questioning the subject matter or the learning process, their potential for critical thought and action will be restricted. Empowering education is a critical – democratic pedagogy for self and social change. It is a student –centred program for multicultural democracy in school and society (Shor, 1992).

Empowerment education is proposed as an effective health education and prevention model that promotes health in all personal and social arenas. The model suggests that participation of people in group action and dialogue efforts directed at community targets enhances control and beliefs in ability to change people's own lives (Wallerstein & Berstein, 1988). Students in empowering classes should be expected to develop skills and knowledge as well as high expectations for themselves, their education, and their futures (Shor, 1992).

Successful learners develop critical thinking, individual initiative, and a sense of themselves as co-creators of the culture that shapes them. This may involve a therapy-like shift of personal paradigm--a "perspective transformation" (Mezirow, 1981) or "life-world transformation" (Wildemeersch & Leirman, 1988) -or it may come as a gradual enhancement of developing power. Because part of the function of a teacher is to prepare students to become more self-directing, it is important at this stage to begin training students in such basic skills as goal setting. Use praise, but with an eye to phasing out praise (extrinsic motivation) and phasing in encouragement (which builds intrinsic motivation) (Dinkmeyer & Losoncy, 1980). Significant predictors of personal student's empowerment are administrator professional treatment of teachers, reflective self-awareness, honouring of student voice, personal teaching efficacy, and satisfaction with teaching as a career (Edwards et al., 2002).

The key role in assisting students to become self-directed learners lies behind teachers. M. Gibbons (2004) introduces idea of a bridge both for students and teachers, a bridge of five stages each involving a new set of tasks, and together providing steps in a gradual transition to self-direction. These five stages are:

- incidental self-direction: introducing self-direction in assignments, special projects or brief use of any of the other approaches to self-direction
- independent thinking: teaching students to form their own judgements, ideas and solutions to problems by transforming the curriculum into questions or by using such participatory approaches as case studies, trials, debates and dramatizations

- self-managed learning: creating guides that tell students how to achieve course outcomes, then teaching them how to regulate their work on the guides, and providing support systems to assist them;
- self-planned learning: teaching students how to design their own plans for achieving course outcomes, negotiating their proposals with them, and coaching them to success;
- self-directed learning: teaching students to analyze the situation, formulate their own goals, plan how to achieve them, take action, solve problems that arise, and demonstrate their achievement (Gibbons, 2004).

Similarly to the Lithuanian situation, the following main aspects can be identified when summing up experience of foreign researchers. Teachers are required to demonstrate knowledge of didactics, innovation and ability to involve international partners into pedagogical and scientific activities. Foreign researchers emphasise importance of close teacher-student cooperation, teacher's behaviour and even his/her sense of humour as well as ability to engage a student into successful study process. Application of the appropriate study methods in the study process is highlighted as the essential study aspect.

1.3.6 Conclusions

1. The EHEA enables a **student to become an active participant of the study process** and take responsibility for the study outcomes because he/she has a possibility to choose a study program and participate in different mobility programs. However, both at the national and international level there is a need to provide high quality studies available for all who are seeking to acquire higher education.

The shift in the teaching and learning paradigm does **not diminish the role of the teacher**. The teacher has to participate in international mobility programs, look for innovative teaching and learning methods to organise studies and make a student an active participant of them.

Student-centred teaching requires **particular personal attitudes from the facilitator** and (at least a certain degree) openness from the side of the curriculum as well as the students. From personal experience we would like to add the requirement on, or at least to emphasise the benefit of social skills and techniques such as moderation. These help to make group processes more transparent, to converge faster and hence to improve student satisfaction.

2. Having analysed experience of different countries researchers, it has become clear that a **certain level of the didactic knowledge** has to be demonstrated by teachers when shifting to the SCL; teacher – stakeholder teamwork and involvement of the international partners as well as appropriate organisational culture are needed to support this transformation process.

Another important aspect (criterion) is the **increased workload of the teacher** because the teacher's roles are realised through organisation of the teaching and learning process, preparation of the teaching and learning materials, provision of distant learning possibilities, and participation in scientific activities that are time consuming.

One more important criterion to pay attention to is **psycho sociological aspects** which are important both for the teacher's scientific activities as well as study quality and the relation between higher education institutions and society.

When moving towards SCL, in many European countries as in Lithuania, Slovenia and Poland as well there is a need to revise the structure of the teacher's workload. This process requires from the teacher more creative approach in choice and application of the innovative teaching and learning methods. Some problems related to the motivation of the teachers when reviewing and evaluating study programs are observed.

With the shift in teacher's roles, the teacher's ability to take care about personal qualification development, to use and to create and use innovative teaching methods supporting the development of the students' competences becomes very important.

2 EMPIRICAL RESEARCH

2.1 INTRODUCTION

Student-centred learning refers not only to the educational theory but also to the educational practice. The below empirical research that was made in Lithuania, Poland and Slovenia enables an insight into teachers' opinions about student-centred learning and/or personalised approach and contains a list of good practices performed by university teachers in the participating countries. This empirical research collected a number of data which helped to produce the second and the third output of the project – the teachers' handbook on student-centred approach and articles published in peer-reviewed and other journals and disseminate the information on the student-centred learning. The teachers' handbook presents the most important findings of the research study and suggestions how to introduce the student-centered and/or personalised approach by descriptions of good practices. Articles published in peer-reviewed journals and/or other publications use the theoretical and empirical data of the research study as well.

2.2 AIMS AND METHODOLOGY OF THE EMPIRICAL RESEARCH

The empirical research was performed with the intention to find out if university teachers **in Lithuania, Poland and Slovenia** know and use different methods which are characteristic for student-centred learning. Before we started this project we checked in which countries the student-centred approach was most developed and found out that U.K., U.S.A., Australia and several other countries had many peer reviewed articles on student-centred learning while there were not so many in the participating countries (especially in Poland and in Slovenia). On the other hand also Polish and Slovenian literature often speak about active learning, problem-based learning, experiential learning etc. which are typical for student-centred approach and both countries introduced the Bologna system of education which emphasizes student-centred learning so SCL approach should be developed.

The empirical research intended to find out how teachers in higher education use this pedagogical approach, how they try to personalise learning, and what are the main challenges faced by teachers.

The first version of the questionnaire had more than 60 questions but the number was then reduced to **25 questions**. The reasons for reduction were mainly that such long questionnaires in East European countries should be paid and that too long questionnaires might avert a number of teachers to respond the questionnaire.

The main findings of the theoretical research suggest that teachers should consider individual experiences, perspectives, backgrounds, interests, capacities and needs of students; provide different opportunities for students to learn and to cooperate, often change teaching methods, discuss which activities bring good results, adapt learning to students' pace. The feedback to students should be constructive, specific, contain explanation, use non-evaluative language, in-time and frequent. The curriculum should include considering experiences, problem-based learning, and new technologies. The European Students' Union emphasizes also students' rights to decide about the

curriculum, teaching and evaluation methods, rights to decide in the committees on the quality of their institution, about credits, and to practically implement SCL approach by including PBL, group-work, projects, case methods, role plays, classroom workshops, distance eduction, different forms of assessment, simulation, research, IT, collaboration of librarians with teachers, etc. On this ground it was decided to ask the teachers about their organization of the learning process, giving feedback to students, including students' interests in the curriculum, considering students' rights and about the attitude of their universities toward student-centred learning.

The most important theme was the **learning process** so teachers were asked about the main advantages of student-centred learning, which teaching methods they used, how they tried to involve students who did not seem to be interested in student-centred learning, if they could support student diversity and individual learning needs, how they helped students who found teaching/learning activities difficult, which typical study materials they offered their students, if they could extend the study period, if they ever took students to libraries, museums, if they asked students to describe cases from their work place, how teachers showed that they valued students, and which were the most frequent problems that they faced when using the student-centred approach. The teachers were asked also to describe cases of good practice of student-centred learning.

Another important set of questions concerns the **assessment**. The teachers were asked to evaluate their assessment, how they provided for students' word in the assessment, how they tried to reduce students' anxiety before examinations, how long it took before students received feedback, if there were procedures for students to appeal decisions regarding their academic attainment or progression, and if they tried less often used ways of examination.

The questions related to the **curriculum** asked teachers if students were consulted on curriculum content, on the teaching and evaluation methods that were included in the curriculum, if students were consulted when learning outcomes in the curriculum were designed and on assessment methods included in the curriculum.

The last set of questions asked if the high schools had a regular **professional development programme** for teaching staff, if they thought that student-centred learning encouraged deep learning and academic engagement and if they believed that student-centred learning meant a link that would improve relationships between students and teachers (and why).

Some questions were closed and some open ended. Subcategories of the open ended questions were made with regard to the frequency of answers. The researchers had to be very careful with these questions because we had to sum up the answers with the same meaning that was sometimes expressed with different words.

We did not investigate how many teachers use the student-centred approach because the Bologna system expects that all the teachers should have introduced the student-centred approach (at least many of its elements). The research also did not intend to solve questions concerning different definitions of SC learning. The research also did not deal with the question of the teachers' work overload because this was out of the scope of our work.

The empirical part of the research presents data analysis of the questionnaires answered by **634 lecturers from 42 higher education institutions in 3 European countries:**
100 lecturers from 10 universities/faculties/colleges in Slovenia
300 lecturers from 22 universities in Poland and
234 lecturers from 10 Lithuanian universities/higher schools.

The empirical research was made in two parts, the first was made in 2015 and the second in 2016. Both questionnaires contained the same questions. When we first sent questionnaires to the management boards, deans and university teachers we expected that we would get more answers. However we received only 187 completed questionnaires (52 from Slovenia, 70 from Poland and 65 from Lithuania). In 2016 we asked more universities (deans of universities and of their departments) if they could help us and we

acquired more answers. The sample in Slovenia is still not very large although we contacted and asked for help almost all tertiary institutions (public and private ones). Slovenia is in comparison with Poland and Lithuania a smaller country but the small number of responses still surprised us and made us wonder if Slovenian university teachers might really not be interested or acquainted with the student-centred learning. However, also in Poland and Lithuania it was not easy to collect about 200 – 300 responses. The results of the research with increased samples are very similar to the results of the first partial research.

We hoped that the teachers would have put down at least short descriptions of their best practices in student-centred learning but this question was answered just by names of individual best practices and not by descriptions. The reasons might be either lack of time or lack of knowledge. Both reasons are probable: the question which asks that the teachers should describe two cases of their or somebody else's best practice really demands some thinking and some time. IBS Ljubljana and Kauno Kolegija Lithuania later tried to invite teachers to participate in a competition for a prize but also this competition gave a rather small number of descriptions of the best practices (e.g. in Slovenia university teachers were asked to write a description on about two pages and the best description was awarded 1000 EUR but we received only 10 descriptions). Besides not having enough time university teachers might also not have enough knowledge because the results of the empirical research show that a considerable number of teachers miss knowledge and skills about the student-centred learning.

2.3 EMPIRICAL RESEARCH IN SLOVENIA

The empirical research in Slovenia included **100 academic teachers from 10 Slovenian universities/faculties and/or colleges** (IBS International Business School Ljubljana, University of Ljubljana, University of Maribor, University of Primorska, Faculty for Industrial Engineering, Gea College Ljubljana, Faculty for Organizational Studies in Novo mesto and in business colleges in Novo mesto, Postojna and Slovenj Gradec). The questionnaires were anonimous and sent around by Internet.

The opinions of teachers are presented in the tables below. The questionnaires were processed by statistical and/or graphic presentation. Descriptions of the tables are limited to the most frequent responses which have the highest statistical significance. Open questions are presented as collected responses. Slovenian teachers did not respond the propositions under »other«.

I Questions related to the teaching/learning process

1 Which are according to your opinion the main advantages of the student-centred learning (1 – very important, 2 - important, 3 - moderately important, 4 - of little importance, 5 – unimportant):

	Proposition	1	2	3	4	5
1.	Motivation of students	72	14	1	6	7
2.	Possibility that students learn at their own pace	27	40	21	8	3
3.	Being more focused upon learning	31	42	16	5	5
4.	Respecting different individuals	35	41	14	5	5
5.	Increase of confidence	38	40	12	6	4
6.	Partnership between teachers and students	45	28	15	10	2

7.	More responsibility and committment	48	33	8	5	6
8.	Other (please describe)					

The majority of the teachers think that the main advantages of the student-centred learning are:

- Increased motivation of students (72 % very important, 14 % important: 86 %)
- More responsibility and commitment (48 % very important, 33 % important: 81 %)
- Increase of confidence (38 % very important, 40 % important: 78 %), and
- Respecting different individuals (35 % very important, 41 % important: 76 %).

However, the Slovenian teachers find all the propositions rather important.

2 Which of the below methods do you include in your teaching (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never):

	Proposition	1	2	3	4	5
1.	Problem-based learning	34	32	23	8	2
2.	Individual or small group based activities	39	36	9	11	4
3.	In-class discussions	42	37	13	3	5
4.	Classroom workshops	18	33	23	15	10
5.	Group presentations	16	30	24	15	13
6.	Projects	16	25	28	21	14
7.	Solving practical problems	50	26	10	8	6
8.	Cooperating in research activities	7	18	25	29	20
9.	Quizzes	6	12	20	29	31
10.	Use of the case method	26	29	23	15	5
11.	Use of role plays	22	18	17	20	21
12.	Collaborative paper assignments	8	23	18	24	23

13.	Web-conferencing environment in distance education	8	5	7	24	53
14.	Other (please describe):					

Slovenian teachers include in their teaching especially:

- In-class discussions (42 % very frequently and 37 % frequently: 79 %)
- Solving practical problems (50 % very frequently and 26 % frequently: 76 %)
- Individual or small group based activities (39 % very frequently and 36 % frequently: 75 %)
- Problem – based learning (34 % very frequently and 32 % frequently: 66 %).

The also often include case studies, workshops and group presentations but they do not work with web-conferencing.

3 How do you try to involve students who do not seem to be interested in the student-centred learning? Please describe with a couple of words.

- Different ways of motivating students 22 %
- Additional explanations 4 %
- Discussions 15 %
- Including a lot of practical examples 10 %
- Offering scores for examination 6 %
- Selection of contemporary and interesting cases that arouse interest of students 23 %
- Different ways of teaching 4 %
- Presentation of importance of the study topics for their work 8 %
- Presentation of benefits of student-centred learning 3 %
- Linking of study topics with their values 1 %
- Humour 3 %
- 5 minutes of sports 1 %
- Inviting students to speak about their experiences regarding the theme 5 %

- Work in small groups/teamwork 10 %
- I tell students who do not want to work to go out 1 %
- Connecting the topic with students' problems 3 %
- By understanding students 2 %
- By trying to find reasons why students are not interested 5 %

Slovenian teachers try to involve students who do not seem to be interested in the student-centred learning by:

- Including contemporary cases that arouse interest of students (23),
- Different ways of motivating students (22).
- By discussions (15).

Beside these they use also a number of other ways like including a lot of practical examples 10, work in small groups etc.

4 *Can you support student diversity and individual learning needs by (1 – yes, 2 – no, 3 – I don't know):*

	Proposition	1	2	3
1.	Offering students additional consultations/advice	94	3	1
2.	Offering students individual examination terms (beside the terms which are defined by the University calendar)	75	25	8
3.	Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results	96	2	1
4.	Enabling students to accelerate their studies (= to finish their studies in 2	53	16	30

	years instead of 3)			
5.	Enabling students to prolong their studies (= to finish their studies in e years instead of 1 year)	48	19	32
6.	Helping foreign students who do not speak your national language	72	8	18
7.	Using special support measures that help students from disadvantaged backgrounds?	41	31	27
8.	Studying either on campus or at a distance	62	24	11
9.	Other (please put down):			

Slovenian teachers support student diversity and individual learning needs mainly by:

- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results (96 %)
- Offering students additional consultations/advice (94 %), and
- Offering students individual examination terms (beside the terms which are defined by the University calendar) 75 %

They also try to help foreign students who do not speak the national language (72 %), they enable students to study either on campus or at a distance (62 %) and accelerate their studies (= to finish their studies in 2 years instead of 3): 53 %.

5 *How do you support students when they find teaching/learning activities difficult (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)*

	Proposition	1	2	3	4	5
1.	I explain the topic again	55	30	10	4	0
2.	I tell them to read additional literature	27	37	26	5	4

3.	I have no time to repeat things	3	7	14	27	46
4.	I am looking for new study methods	26	40	25	5	1
5.	Other:					

When students find teaching/learning activities difficult, Slovenian teachers support students by:

- Explaining the topic again (55 % very frequently, 30 % frequently: 85 %)
- Looking for new study methods (26 % very frequently, 40 % frequently: 66 %)
- Tell them to read additional literature (27 % very frequently, 37 % frequently: 64 %).

6 Which typical study materials do you introduce to support students? (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)

	Proposition	1	2	3	4	5
1.	Textbook	49	22	14	7	5
2.	Additional slides	46	23	20	4	5
3.	List of additional literature	43	24	14	13	3
4.	Research articles	27	30	22	8	10
5.	Popular scientific literature	18	25	28	17	8
6.	Statistics	16	20	24	24	12
7.	Other (please describe with a couple of words):					

Slovenian teachers introduce mainly the following study materials with which they support students:

- Textbooks (49 % very frequently, 22 % frequently: 71 %)
- Additional slides (46 % very frequently, 23 % frequently: 69 %)
- Lists of addtional literature (43 % very frequently, 24 % frequently: 67 %).

It is surprising that university teachers do not use more research articles, popular scientific literature and statistics.

7 Do you ever ask students if they have enough time for studies? If you find that is not enough, what do you do?

- I suggest that they come to a later/additional examination term 11
- I explain the student which themes are the most important for the examination 6
- I prepare a list of possible questions for examination 3
- I repeat the most important parts of the syllabus 6
- I suggest that they regularly come to lectures and listen intensively 4
- I suggest a time plan 15
- I tell students that they do not have much time and that it will be difficult to pass the exam 1
- Additional help to produce seminary papers 1
- I show them online teaching in an interesting way 1
- I discuss their problems 2
- I suggest different/effective methods for studying 14
- I generalize and reduce the depth of the studies 1
- I do not ask 10
- I adapt lectures and examination terms 6
- I have individual discussion with students 4
- I suggesst different ways of effective study methods 3

Many Slovenian teachers ask students if they have enough time for studies (but 10 % claim that they do not). If they find that there is not enough time, the teachers:

- suggest a time plan 15 %
- suggest different/effective methods for studying 14 %
- suggest that they come to a later/additional examination term 11 %
- explain the student which themes are the most important for the examination 6 %
- repeat the most important parts of the syllabus 6 %

- suggest that students regularly come to lectures and listen intensively 4 % and/or
- adapt lectures and examinations terms 6 %.

8 Do you ever take students to:

- Libraries: 12 %
- Museums 8 %
- Ask them to describe a case from their work place? 78 %
- Other (please describe with a couple of words): 33 % (not specified)

Slovenian teachers include in their teaching cases from students' work place but rarely take students to the libraries or museums. Since every university has its own library this might mean that libraries are not much in use or that there is no cooperation between librarians and teachers.

9 How do you show that you value students? (please describe with a couple of words):

- I praise students 11 %
- I speak with them (ask them about their expectations, how they wish to cooperate, what problems they have etc.) 24 %
- I offer information also beyond lectures 10 %
- By my relationship and approach to students: I try to be kind 5 %
- I help them 4 %
- I show respect 19 %
- I try to understand diversity and individual characteristics 5 %
- I try to be fair 2 %
- I am relaxed and show humour 5 %
- I create a good team 2 %
- Empathy towards each individual 3 %
- Students can contact me personally, by mail or phone 8 %
- I memorize their names 3 %
- I am open for additional questions, consultations 7 %
- By mimics and voice 2 %

- I am interested in their work and life goals 3 %
- By giving them additional activities and advice 6 %
- I try to find new ways how to motivate people for foreign languages 1 %
- I try to teach them as much as possible 2 %
- I try to be tolerant, understanding, sensible towards each individual 2 %
- By being positive 1 %
- I encourage students 4 %

Slovenian teachers show that they value students especially so that they:

- speak with them 24 %
- show respect 19 %
- praise students 11 %
- offer information also beyond lectures 10 %

Beside these the teachers have a number of other ideas how to show that they appreciate students.

10 Which are the most frequent problems that you face when using the student-centred approach? (1 – yes, 2 – no, 3 – I don't know):

	Proposition	1	2	3
1.	Strict syllabus that does not allow student-centred approach	30	55	12
2.	No interest in the university	14	58	22
3.	Lack of knowledge and skills about student-centered learning	46	36	14
4.	Study programs are not being able to change quickly	54	34	6
5.	Other (please put down)			

The most frequent problems that teachers face when using the student-centred approach are:

- Study programs cannot be changed quickly (54 %)
- Lack of knowledge and skills about student-centered teaching / learning method (46 %)
- Strict syllabus that does not allow student-centred approach (30 %).

Since changing study programmes requires a procedure that can take months and/or years it was expected that this would be a problem. But we did not expect that so many teachers would complain about lack of knowledge and skills regarding student-centred learning. Although teachers claim that they have some development programmes (as explained later) they obviously do not include student-centred learning.

11 Please describe two cases of good practice of the student-centred learning (either good practice that you use or good practice that you have heard of):

- Working in groups 8 %
- Case studies 3 %
- Discussions 3 %
- Role playing 2 %
- Describing students' problems on their work place 6 %
- Trying to find study methods that will lead to new knowledge 1 %
- Applying studies to students' practical experiences 3 %
- I prepare special programme and examinations for students who are hospitalized 1 %
- I offer students distance study although our school officially does not perform it 1 %
- Individual examinations each week 1 %
- I often adapt to younger generations by contemporary themes and technologies (facebook, start-ups, modern phones etc.) 1 %

- I suggest that they learn languages with the help of their children, by listening radio and TV in foreign language, students make tests themselves, they work in pairs 4 %
- Solving problems in real situations 3
- I present a problem and its solutions (from everyday life) 2 %
- I give additional consultations 2 %
- I use Moodle 1 %
- Different workshops and courses 2 %
- Research of motivation of employees for the needs of their firms, inviting directors from practice 1 %
- Application of practice on theory 4 %
- I explain that mistakes are nothing bad, I try to be kind, I repeat things that they do not understand, I introduce some minutes of sports or relaxation 1 %
- Examination passed in more parts 1 %
- Explaining tricks how to remember words or grammar 1 %
- By special projects e.g. Out of forty 2 %
- Helping student who cannot walk, understanding diversity 1 %
- Explaining the topics with examples 1 %
- Quizzes in e-learning 1 %
- Students' own innovations 1 %
- Students' research work – cooperation in real projects 2 %
- Students have to learn a topic and then we discuss things 1 %
- Two teachers are present in the class 1 %
- Written projects selected by students themselves 2 %
- Encouraing critical thinking 2 %
- Visiting working organisations 4 %
- Participating in conferences and commenting the papers 1 %
- Presentation of a work place created by a student himself/herself 1 %
- Making a business plan 1 %
- Career plan 1 %

- Essays (about students, their competences, mission, vision, SWOT analysis, career plans) 1 %
- Family business (application of theory on practice) 1 %
- Using the methods of coaching 1 %
- Neuro linguistic programming 1 %
- Recording of a lecture 1 %
- Reading biblographies of teachers (novels) 1 %
- Reflexions on readings 1 %
- Dynamic lecturing 1 %
- Work in pairs 1 %
- Adapting the programme to the majority of students 1 %
- Preparing notes together 1 %
- Asking students what interests them 1 %
- Including teachers from working organisations 1 %
- Including students in projects 1 %
- Presentation of business themes by literature and movies 1 %
- Participation of students in meetings, analysis of documents, writing minutes, sending them to the forum 1 %
- No answer: 1 %
- I do not know student-centred methods: 2 %
- Student-centred learning is just a phrase: 1 %
-

The teachers describe a number of cases of good practice with which they introduce the student-centred learning. Among the most frequent are:

- Working in groups 8 %
- Describing students' problems on their work place 6 %
- Visiting working organisations 4 %
- Application of practice on theory %
- Teachers suggest that students learn languages with the help of their children, by listening radio and TV in foreign language, students make tests themselves, they work in pairs 4 %.

We actually expected that the teachers would describe good practices with more words but their descriptions are limited to minimum. This is a pity because we are sure that many teachers might have their own innovative variants of the SCL teaching methods.

II Questions related to the feedback

12 Select the evaluation methods which you use (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Method	Importance
Content-heavy	1-40, 2-41, 3-11, 4-4, 5-1
Summative	1-22, 2-37, 3-28, 4-8, 5-2
Norm-referenced	1-85, 2-8, 3-1, 4-2, 5-1
Flexible	1-32, 2-31, 3-16, 4-15, 5-3
Criteria referenced	1-84, 2-10, 3-1, 4-2, 5-0
Formative	1-1, 2-9, 3-28, 4-24, 5-35
Other (please put down)	

Evaluation methods of Slovenian teachers are:

- Criteria-referenced (84 % very frequently, 10 % frequently: 94 %)
- Norm-referenced (85 % very frequently, 8 % frequently: 93 %)
- Content-heavy (40 % very frequently, 41 % frequently: 81 %)
- Flexible (32 % very frequently, 31 % frequently: 63 %).

13 Evaluate your assessment students feedback: (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Proposition	Importance
Do you make feedback, comment directed towards the task	1-59, 2-23, 3-7, 4-8, 5-0

Do you discuss strengths and weaknesses	1-41, 2-33, 3-12, 4-8, 5-3
Explain mistakes and give advice how to improve	1-45, 2-39, 3-6, 4-5, 5-2
Help to focus on skills relating to a deep approach to learning	1-42, 2-30, 3-18, 4-5, 5-2
Other (please explain)	

Slovenian teachers most often make feedback by:

- Explanation of mistakes and advice how to improve (45 % very frequently, 39 % frequently: 84 %)
- Comments directed towards the task (59 % very frequently, 23 % frequently: 82 %)
- Discussing strengths and weaknesses (41 % very frequently, 33 % frequently: 74 %).

14 How do you provide for students' word in the assessment?

- Students suggest self-assessment grades 16 %
- Students negotiate self-assessment grades 4 %
- Students can come and ask for explanation of the marks 87 %
- Other (please explain): 12 %

Teachers provide for students' word in the assessment mainly so that students come and ask for explanation of the marks 87 % and so that students suggest self-assessment grades (16 %).

15 How do you try to reduce students' anxiety before examinations?

- I speak with students and try to relax them 67 %
- I give them questions that help to repeat the topic 64 %
- I tell them to calm down 17 %
- I tell students to think logically 48 %
- Other (please describe): 12 %

Teachers try to reduce students' anxiety before examinations by:

- Speaking with students and trying to relax them 67 %
- Giving them questions that help to repeat the topic 64 %
- Telling students to think logically 48 % (which is not very helpful).

16 How long does it take before students receive feedback?

- One week 67 %
- Two weeks 3 %
- One month 0
- Other: 26 %

The majority of teachers give feedback to students in one week.

17 Are there procedures for students of your University to appeal decisions regarding their academic attainment or progression?
Yes 77 %;
No 1 %;
I don't know 17 %

In Slovenia there are procedures for students to appeal decisions regarding their academic attainment or progression: 77 % positive answers.

18 Has any of the teachers tried to introduce student-generated examination questions? If yes, How were the results?

I do not know 22 %
No 15 %
Not yet but a good idea 5 %
Yes, they give questions just like the teacher/it was successful 8 %.

Just 8 % teachers tried to introduce student-generated examination questions and they say that it functioned well.

III Questions related to curriculum

19 Are students of your University consulted on curriculum content? (Briefly describe how)
Yes, the students can suggest changes by students' representatives 45 %
No answer: 2 %
I do not know 7 %
No 10 %
Students are pleased with the curriculum 1 %

The main part of the teachers claim that students can suggest curriculum contents by students' representatives 45 %

20 Are students of your University consulted on the teaching methods that are included in the curriculum? (Briefly describe how).

- Yes in yearly evaluations of their studies 54 %
- No 8 %
- They are pleased with teaching methods 1 %
- No answer: 1 %
- I do not know 6 %.

Slovenian students can express their opinion on the teaching methods that are included in the curriculum by yearly evaluations of quality (54 %).

21 Are students of your University consulted when learning outcomes in the curriculum are designed? (Briefly describe how)

- No 10 %
- Yes 33 %

- I do not know 9 %
- No answer: 3 %

Slovenian students are consulted when learning outcomes in the curriculum are designed: 33 %.

22 Are students of your University consulted on assessment methods included in the curriculum? (Briefly describe how)

- Yes 42 %
- No answer 2 %
- I do not know 7 %
- No 7 %

Slovenian students are consulted on assessment methods included in the curriculum: 42 % positive answers.

IV Questions related to professional development programmes

23 Does your institution have a regular professional development programme for teaching staff?

Yes - 59 %

No - 21 %

I don't know-13 %.

59 % of teachers claim that their university has a regular professional development programme for teaching staff. Since teachers claim (as quoted above) that they lack knowledge about SCL, these professional development programmes probably do not include SCL.

24 Do you think that student-centred learning encourages deep learning and academic engagement? Please justify.

- Yes but such methods can spoil students

- Yes this stimulates self-initiative and reflection and focuses students' personal growth
- Yes 42 %
- Yes, students feel more responsibility towards knowledge acquisition
- Yes, students feel more self-confident
- Yes, it increases motivation and success of students 9 %
- No answer: 2 %
- Yes but this is impossible if there are too many students
- Yes, students are more pleased, results are obvious immediately
- Yes but it depends on students 2 %
- No 2 %
- Yes because this stimulates also teachers that they teach contemporary topics and can adapt to new generations 3 %
- Yes, this improves the atmosphere
- Yes, students acquire more concrete knowledge, they communicate more and learn more easily
- Yes it stimulates studies because students feel more attention
- Yes, students must feel that they are not just numbers
- I do not know 5 %
- According to my experiences there is not enough time
- No answer 1 %.

The majority of teachers think that student-centred learning encourages deep learning and academic engagement: 65 %. A number of teachers think that it increases motivation and success of students.

25 Do you believe that student-centred learning means a link that will improve relationships between students and teachers? Please justify.

- Yes 40 %
- Yes, enables communication and feedback to teachers 2 %

- Yes, this is the best way to improve relationships 3 %
- Yes in theory but there are different practical situations 1 %
- No answer 2 %
- Yes this is urgent. But limits are still necessary – students must achieve basic requirements and teachers must perform the study process so that the required level of knowledge is achieved and that personal growth is ensured 2 %
- Yes, more trust between students and teachers 1 %
- Yes, students are central for our work and personal contacts have very good influence on the study system 2 %
- Yes, there should be no other way of teaching than student-centred approach 1 %
- Yes, this is possible but there is also the question of motivation for this approach 1 %
- Yes, students appreciate if teachers pay attention to them; students' fears are reduced 1 %
- Yes, because the emphasis is on cooperation between teachers and students 1 %
- Yes, students and teachers have in this way common interests 1 %
- Yes, it is necessary to change the paradigm of education 1 %
- Yes, if the teacher discusses also personal matters, gives possibility to explain things, shows humour, this brings about better contacts and students more easily accept the teacher who is a normal human being and their friend who wishes that they study well 1 %
- Maybe 2 %
- Yes, it reduces the distance between students and teachers 1 %
- The relationship between teachers and students should be ethical and friendly already now 1 %
- Yes, partly, especially with students who need additional motivation 1 %
- Yes, student-centred learning increases engagement of students and influences on better relationships between students and teachers 1 %
- Yes, possibly but not within the present system of education 1 %
- Yes but I think this depends upon each school, university, professor and student 1 %

- No 1 %.

Teachers believe that student-centred learning means a link that will improve relationships between students and teachers.

2.4 EMPIRICAL RESEARCH IN POLAND

300 academic teachers from 22 Polish higher schools (Uniwersytet Technologiczno-Humanistyczny im. Kazimierza Pułaskiego w Radomiu, Katolicki Uniwersytet Lubelski Jana Pawła II, Uniwersytet Przyrodniczo-Humanistyczny w Siedlcach, Uniwersytet Jana Kochanowskiego w Kielcach, Uniwersytet Jagielloński, Wyższa Szkoła Handlowa w Radomiu, Akademia Humanistyczo-Ekonomiczna w Łodzi, Społeczna Akademia Nauk w Łodzi, Wyższa Szkoła Menedżerska w Warszawie, Wyższa Szkoła Biznesu w Dąbrowie Górniczej, Uczelnia Warszawska w Warszawie, Staropolska Szkoła Wyższa w Kielcach, Akademia Jana Długosza w Częstochowie, Uniwersytet Pedagogiczny im. KEN w Krakowie, Akademia Frycza Modrzewskiego w Krakowie, Wyższa Szkoła Policyjna w Szczytnie, Collegium Civitas w Warszawie, Państwowa Wyższa Szkoła Zawodowa w Głogowie, Wyższa Szkoła Adminisracji Publicznej im Stanisława Staszica w Białymstoku, Uniwersytet Szczeciński w Szczecinie, Uniwersytet Ekonomiczny we Wrocławiu, Uniwersytet Rzeszowski) participated in the research.

Responses are in the tables below. The analysis was made by mathematical presentation, summing up the results of responses and graphical presentation in the form of summary tables. Responses are systematised from the most to the least important. Descriptions of the tables are limited to the three most frequent responses, which indicate the highest characteristic intensity and have the greatest statistical significance. The analysis of open questions shows all collected responses. Statements and descriptions of individual questions referring to answers of responder's have been processed as well.

First part: Education/Training process

I Questions related to the teaching/learning process

1 Which are according to your opinion the main advantages of student-centred learning (1 - very important, 2 - important, 3 - moderately important, 4 - of little importance, 5 – unimportant):

	Proposition	1	2	3	4	5
1.	Motivation of students	272 90.6%	17 5.6%	11 3.8%		
2.	Possibility that students learn at their own pace	46 15.3%	237 79%	17 5.7%		
3.	Being more focused upon learning	287 95.7%	13 4.3%			
4.	Respecting different individuals	43 14.3%	223 74.3%	34 11.4%		
5.	Increase of confidence	33 11%	69 23%	186 62%	12 4%	
6.	Partnership between teachers and students	291 97.1%	9 2.9%			
7.	More responsibility and committment	219 72.9%	39 12.9%	43 14.3%		
8.	Other (please describe)	Regularity: 20 Honouring of obligations:31 Honesty: 5 Science practical approach: 12 Responsibility: 10				

300 (100 %) academic teachers pointed out partnership between lecturer and student as the main advantage in student-centred learning. 300 (100 %) teachers - mentioned as advantage students' being more focused upon learning. On the third place is motivation of students: 289 (96%) teachers.

2 Which of the below methods do you include in your teaching (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never):

	Proposition	1	2	3	4	5
1.	Problem-based learning	276 92%	24 8%			
2.	Individual or small group based activities	180 60%	93 31%	24 8%	3 1%	
3.	In-class discussions	300 100%				
4.	Classroom workshops	64 21.4%	107 35.7%	77 25.7%	9 2.9%	43 14.3%
5.	Group presentations	300 100%				
6.	Projects	279 92.9%	21 7.1%			
7.	Solving practical problems				219 72.9%	81 27.1%
8.	Cooperating in research activities				22 7.4%	290 96.6%
9.	Quizzes			223 74.3%	9 2.9%	43 14.3%
10.	Use of the case method		262 87.1%	34 11.4%	4 1.4%	
11.	Use of role plays	300 100%				
12.	Collaborative paper assignments	300 100%				
13.	Web-conferencing environment in Distance education					300 100%
14.	Other (please describe):	School problems disscusing: 8.6% - 26 School theatre: 5.7% - 14 Preparing movies: 2.9% - 9 Writing conspects of lessons: 2.9% - 9				

The most commonly used teaching methods are:

- In-class discussions – 300 (100 %)
- Group presentations –300 (100 %)
- Use of role plays – 300 (100 %)
- Classroom workshops – 300 (100 %)
- Projects – 279 + 21 (100 %)
- Problem-based learning – 276 + 24 (100 %)
- Individual or small group based activities – 180 + 93 (91 %).

The respondents do not use or rarely use such techniques as: cooperating in research activities: 290 teachers (96.6% never use it and 22 (7.4 %) rarely use it.

None of the respondents used the Internet in an environment conference, and distance education.

Among other methods the teachers listed the following factors:
School problems disscusing: 42 (14%)
School theatre: 18 (6%)
Preparing movies: 9 (3%)
Writing concepts of lessons: 9 (3%).

3 How do you try to involve students who do not seem to be interested in student-centred learning? Please describe with a couple of words.

Allocation of topics for preparation: 248 (82.6%) teachers
Presentation of finished task in the forum of group: 235 (78.3%) teachers
Work as project methods: 218 (72.6%) teachers
Recommending literature, news of the topic: 201 (67%) teachers
Individual allocation of task: 182 (61.3%) teachers
Personal training: 173 (57.6%) teachers
Stimulation of motivation: 183 (61%) teachers
Positive reinforcement: 177 (59%) teachers
Common educational trips organized for students: 82 (27.3%) teachers
Students' educational circle: 130 (43.3%) teachers
Taking students to conferences: 108 (36%) teachers
Writing e- mails to students: 71 (20 %) teachers

4 *Can you support student diversity and individual learning needs by (1 – yes, 2 – no, 3 – I don't know):*

	Proposition	1	2	3
1.	Offering students additional consultations/advice	300 100%		
2.	Offering students individual examination terms (beside the terms which are defined by the University calendar)	300 100%		
3.	Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results	300 100%		
4.	Enabling students to accelerate their studies (= to finish their studies in 2 years instead of 3)		124 41.3%	176 58.6%
5.	Enabling students to prolong their studies (= to finish their studies in e years instead of 1 year)		124 41.4%	176 58.6%
6.	Helping foreign students who do not speak your national language	261 87%	39 13%	
7.	Using special support measures that help students from disadvantaged backgrounds?			300 100%
8.	Studying either on campus or at a distance	300 100%		
9.	Other (please put down):	Preparation and consultation of student's work by Internet: 180 – 60.0% Consultation by Internet: 136 – 45.3% Invitation for science conference: 86 – 28.6% Meeting with experts: 76 – 25.3% Additional consultation: 63 - 21%		

Respondents actively support individual needs of students.

The most frequently used methods of supporting the students are the following:

- Offering students additional consultations/advice: 300 – 100 %
- Offering students individual examination terms: 300 – 100 %
- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results: 300 – 100 %
- Studying either on campus or at a distance: 300 – 100 %
- Helping foreign students who do not speak your national language: 261 – 87 %.

From 300 respondents 176 (58.6%) teachers do not know if they can enable students to accelerate their studies. However in the same group 124 (41.3%) teachers do not have the ability to accelerate/prolong studies. Perhaps it results from organizational capabilities of universities in which teachers work.

Among other forms of support academic techers provide the following:
Preparation and consultation of student's work through Internet: 180 (60 %)
Consultation through Internet: 136 (45.3%)
Invitation to science conferences: 88 (28.6%)
Meeting with experts: 76 (25.3%)
Additional consultation: 63 (21%)

5 How do you support students when they find teaching/learning activities difficult (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)

	Proposition	1	2	3	4	5
1.	I explain the topic again	280 93.3%	20 6.7%			
2.	I tell them to read additional literature	30 10%	231 77%	39 13%		
3.	I have no time to	54	246			

	repeat things	18%	82%			
4.	I am looking for new study methods	129 43%	150 50%	21 7%		
5.	Other:	Sugestion regarding additional literature: 39.6% - 119 Additional lessons: 42% - 126 Stimulationg of student's creative: 276 – 83 % Individual expanations of topic: 14% - 42				

Polish teachers support students when they find teaching/learning activities difficult in different ways:

- Explaining the topic again: very frequently – 280 (93.3%), frequently 20 (6.7%); 300 lecturers (100 %)
- 231 (77%) frequently tell students to read additional literature, very frequently 30 (10%); 261 (87%)
- 150 academic teachers (50 %) are looking for new study methods, 129 lecturers (43 %) do that often; 279 (93 %).

It's worrying that 246 teachers (82 %) often do not have time to repeat study topics, and 54 (18 %) lecturers do not have that time very often.

Among other forms of support the teachers mentioned:
Reading additional literature: 39.6 % - 119
Additional lessons: 128 (42.6%)
Stimulating of student's creativeness: 83 (27.6%)
Individual explanations of topic: 42 (14%)

6 Which typical study materials do you introduce to support students? (1 – very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)

	Proposition	1	2	3	4	5
1.	Textbook	96 32%	153 51%	81 27%		
2.	Additional slides		249	51		

			83%	17%		
3.	List of additional literature	253 84.3%	47 15.7%			
4.	Research articles			65 21.7%		235 78.3%
5.	Popular scientific literature			300 100%		
6.	Statistics					300 100%
7.	Other (please describe with a couple of words):	Internet source: 290 – 96.6%				

Polish teachers offer students:

- Lists of additional literature, 253 – 84.3 % very frequently and 47 – 15.7 % frequently: 100 %
- Textbooks – 153 (51 %) frequently, 96 (32 %) very frequently: 249 (83 %)
- Additional slides are used frequently by 249 teachers (83 %)

All respondents recommend to students popular scientific literature, but only occasionally. None of the respondents uses statistics. Occasionally few lecturers – only 65 (21.7 %) use research articles, 235 lecturers (78.3 %) resign from this form of support. Among other methods academic teachers pointed Internet sources – 290 (96.6%).

7 Do you ever ask students if they have enough time for studies? If you find that is not enough, what do you do?

I never ask students if they have enough time for studies – 250 (83.3%).
Sometimes I ask if they have enough time – 35 (11.6%).

Among the teachers who asked students about time there were 42 (14%) answers that there is not enough time. 18 lecturers argue that students have sufficient time to learn. 42 teachers whose students answered that they have no enough time use the following measures:
Suggesting books on time management – 28 (9.3%)

Working in house with deadline – 24 (8%)
Selecting the most important issues in the materials for the exam – 14 (4.7%)

8 Do you ever:

- take students to libraries 201 (67%)
- take students to museums 54 (18%)
- speak about their work 291 (97%)

Among other forms of student interest, adacemic teachers listed:

- Own life experience related to the topic of activities - 199 (66.3%)
- Didactic work outside the university – 148 (49.3%)
- Educational trips – 140 (46.6%)
- Study visits to workplaces – 181 (60.3%)

9 How do you show that you value students? (Please describe with a couple of words):

Assessment of the work entered in the index and cards – 279 (93%)
Individual verbal commendation – 271 (90.3%)
Commendation in group – 237 (79%)
Proposition of common project publication – 139 (46.3%)
Proposition of conference participation – 133 (44.3%)
Invitation to Student Scientific – 122 (15.6%)
Internships proposition at the company – 47 (5.6%)
Proposition of doctoral studies – 17 (5.6%)
Project publication – 11 (3.6%)

10 Which are the most frequent problems that you face when using student-centred approach? (1 – yes, 2 – no, 3 – I don't know):

	Proposition	1	2	3

1.	Strict syllabus that does not allow student-centred approach	39 13%	291 97%	
2.	No interest in the university	243 81%	577 19%	
3.	Lack of knowledge and skills about student-centered / learning	144 48%	156 52%	
4.	Study programs are not being able to change quickly	300 100%		
5.	Other (please put down)	Huge group of students: 219 - 73% Lack of opportunities for individual study program: 138 - 46% Lack of student's time: 135 - 45% Lack of financal resources: 102 - 34%		

300 academic teachers (100 %) indicated that study programs cannot be changed quickly. 243 (81%) answered that there is no interest in the University. Half of teachers (144 – 48 %) think that lack of knowledge and skills in the area of student-centred teaching is a problem.

A number of respondents – 156 (52%) did not find that strict syllabus would not allow student-centred approach.

Among other problems the teachers mentioned:
Huge group of students: 219 (73%)
Lack of opportunities for individual study program: 138 (46%)
Lack of student's time: 135 (45%)
Lack of financal resources: 102 (34%)

11 Please describe two cases of good practice of the student-centred learning (either good practice that you use or good practice that you have heard of):
Appealing to the experience of students – 288 (96%)

Teaching through projects and problems – 281 (93.6%)

Education in the specialty – 271 (90.3%)

Lecturers interest in the problems of students – 260 (86.6%)

Linking theory and practice – 197 (65.6%)

Analysis of students' expectations associated with a particular subject – 195 (65%)

Use of remote learning methods -180 (60%)

Systematic consultation for students – 178 (59.3%)

Virtual Dean's Office and served on the topics of work, evaluation, etc. – 174 (58%)

Inclusion in the teaching process students' opinions – 158 (52.6%)

Methods of teamwork – 156 (52%)

Student volunteering – 151 (50.3%)

Student Scientific – 149 (49.3%)

Activities of teaching methods such as: drama, theatre – 146 (48.6%)

Regular subjects consultations – 143 (47.6%)

Practical implementation of projects which are discussed in class – 141 (47%)

Teaching by students in schools – 139 (46.3%)

Science multiculturalism through ERASMUS +, days of national culture, international symposiums and intercultural – 137 (45.6%)

Combining educational work with local businesses – 132 (44%)

Discussions in the group on a selected cultural, religious or social topic – 127 (42.3%)

Good access to libraries and sources indicated by the lecturers – 123 (41%)

Clear criteria for student assessment – 120 (40%)

Student's conferention – 119 (39.6%)

Taking students to the museum, a cinema theater, science picnics – 118 (39.3%)

Student's publications – 116 (38.6%)

Establishment of business combined with the design, own design – 106 (35.3%)

The availability of lecturers at the university – 96 (32%)

The substantive preparation of teachers for classes – 89 (29.6%)

Publishing plans and syllabuses on the Internet – 87 (29%)

Information about lectures – 38 (12.6%)

Participation of students in decision making process – 26 (8.6%)

Students availability to university documents – 15 (5%)

II Questions related to the feedback

12 Select the evaluation methods which you use (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Method	Importance
Content-heavy	6 – 100%
Summative	2–91%; 1–18%; 3–1%
Norm-referenced	3–8.7% , 6–91.3%
Flexible	1–98%, 2–2%
Criteria referenced	4–75%, 3–25%
Formative	1–93%, 2–7%
Other (please put down)	student self-assessment: 25%

With regard to the evaluation methods Polish teachers use:

- Try to be flexible - 294 (98%) very frequently and 6 (2%) frequently: 100 %
- Formative evaluation – 279 (93%) very frequently and 21 (7%) frequently: 100%
- Summative assessment is used by 273 (91%) very frequently, by 24 (8%) frequently: 92.9 %.

Criteria referenced assessment is rarely used by 225 (75%), and occasionally by 74 (25%). Norm-referenced assessment is occasionally used by 26 (7%) and 247 (93%) teachers answered "I don't know".

Student self-assessment as an evaluation method is used only by 75 teachers (25 %).

13 Evaluate your assessment - feedback: (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Proposition	Importance
Do you make feedback, comment directed towards the task	1–100%
Do you discuss strengths and weaknesses	1–43%, 2–36%, 3–21%
Explain mistakes and give advice how to improve	2–90%, 3–5%, 4–5%
Help to focus on skills relating to a deep approach to learning	3–63%, 4–20%, 6–17%
Other (please explain)	

The above table indicates that academic teachers make feedback by:

- Comments directed towards the task – 100 % of respondents answered that they make comments very frequently
- 129 (43%) very frequently discuss the strengths and weaknesses of working with students and 108 (36%) do that frequently: 237 (79) %
- Among the respondents 270 (90%) explain mistakes by giving advice how to improve
- 189 (63%) occasionally help students to focus on skills related to a deep approach to learning.

The teachers did not propose another variant of the answer.

14 How do you provide for students' word in the assessment?

- Students receive an assessment from results of adopted scoring exam: 108 (36%)
- Students can come and ask for explanation of the marks: 72 (24%)
- Students suggest self-assessment grades: 48 (16%)
- Students negotiate self-assessment grades: 30 (10%)
- Students have no impact on the assessment: 33 (11%)

15 How do you try to reduce students' anxiety before examinations?

- I speak with students and try to relax them – 213 (71%)
- Group exams– 84 (28%)
- Defense of the project – 48 (16%)
- I give them questions that help to repeat the topic – 48 (16%)
- I tell them to calm down - 39 (13%)
- Exams by the Internet – 29 (9.6%)

16 How long does it take before students receive feedback?

- One week – 282 (94%)
- Two weeks – 18 (6%)
- One month – 0
- Other -0

The biggest part of respondents – 282 (94%) reported that the waiting time is not longer then one week. Just 18 (6%) teachers say that the feedback can extend up to two weeks.

17 Are there procedures for students of your University ***to appeal decisions*** *regarding their academic attainment or progression?*

Yes – 300 (100%) people

No – 0

I don't know – 0

18 Have any of the teachers tried to introduce student-generated examination questions? If yes, how were the results?

Yes – 300 (100%)

Correct solution of task, pass the exam (at least for the minimum assessment) – 282 (94%)

Better understanding of the commands in the task – 12 (4%)

Nothing helped students – 6 (2%)

III Questions related to curriculum

The third part of the questionnaire opens the question if students were consulted on curriculum content. Respondents responded to this problem as follows:

19 Are students of your University consulted on curriculum content? (Briefly describe how)

Polish teachers answered with more than one answer. 249 (83.3%) answered affirmatively that curriculum was consulted by students. 19 (6.3%) pointed out that curiculum were not consulted and 12 (4%) replied that they did not know. Ways of consultations were different. The respondents' answers are shown below:
Discussions during the Faculty Council: 100 (33.3%)
Conversations during the meeting with students: 92 (30.6%)
Surveys among students during the curriculum: 80 (26.6%)
Overview of the curriculum in college library or in the Internet: 80 (26.6%)
During the presentation, during the first class: 77 (25.6%)
When preparing the opinion on the internal organization of curriculum: 59 (19.6%)
Consultations in the framework of meetings with parents: 57 (19%)
During the meeting of the university Senate: 29 (9.6%)
Consultation before the examination with lecturer: 8 (2.6%)

20 Are students of your University consulted on the teaching methods that are included in the curriculum? (Briefly describe how).

Students are not involved in consultation about teaching methods and ways of evaluating learning outcomes: 263 (87.6%)
Students were consulted teaching and assesment methods: 32 (10.6%)
I don’t know if students were consulted teaching and assesment methods: 17 (5.6%).

It should be noted that teachers do not see needs to consult the methodology of learning with students. For the biggest part of respondents this is unnecessary.

21 Are students of your University consulted when learning outcomes in the curriculum are designed? (Briefly describe how)

There has not been consultation with students – 300 (100%) teachers.

22 Are students of your University consulted on assessment methods included in the curriculum? (Briefly describe how)

Students are not consulted on assessment methods in the programs of education: 248 (82.6%)
Students were consulted on assessment methods included in the training programs: 38 (12.6%)
I do not know if students were consulted on assessment methods included in the curriculum: 4 (1.3%).

Respondents did not say how consultation with students regarding assessment methods proceeded.

IV Questions related to professional development programmes

23 Does your institution have a regular professional development programme for teaching staff?
Yes – 228 (76%)
No – 72 (24%)
I don't know – 30 (10%)

76 % of lecturers said that their universities have regular professional development programmes and 24 % teachers missed such programmes in their institution.

24 Do you think that student-centred learning encourages deep learning and academic engagement? Please justify.

Respondents gave more than one answer.
Methods of the student-centred learning engage students with science: 213 (71%)
Engagement in education does not depend on the methods of education: 69 (23%)
I have no opinion: 18 (6%)
Student-centred approach is focused on modern information technology attractive for students – 197 (65.3%)
It contributes to individuality and subjectivity of students – 188 (62.6%)
Students are at the center of education - 170 (56.6%)
It uses activity and creativity of student - 149 (49.6%)
Student-centred learning is practical - 137 (45.6%)
Student-centred learning teaches teamwork - 99 (33%)
Student-centred learning reveals career prospects – 82 (27.3%)
This kind of teaching creates a partnership between the teacher and the student - 71 (23.6%)
It connects students with the university – 49 (16.3%)
It opens students the work environment – 41 (13.6%)
It shapes the self-reliance of students – 33 (11%)
It teaches responsibility toward themselves and the team – 27 (9%)
It is modern – 9 (3%)
It is less stressful than traditional teaching – 5 (1.6%)

25 Do you believe that student-centred learning means a link that will improve relationships between students and teachers? Please justify.

The respondents gave more than one answer:

The bigger part of respondents believes that student-centred learning will improve relations beetween academic teachers and students – as answered by 250 (83.3%) of teachers. 47 (15.7%) teachers think that student-centred learning will not change anything.

The teamwork improves mutual relationship based on shared responsibility and trust to all members of the team - 125 (41.6%)
Teachers can be recognized from the other side than the lectures – 117 (39%)
Teachers are partners in this teaching for students – 102 (34%)
Students feel that they are seriously taken by teachers - 97 (32.3%)
Students and teachers have constant contact with each other - 84 (28%)
Teachers and students jointly discuss important issues for both parties - 77 (25.6%)
Student-centred learning gives prospects for the development of students and teachers, creating a common space for them - 50 (16.6%)
The university becomes responsible for the future of students - 29 (9.6%).
The student has the feeling that he is responsible for the future the university – 11 (3.6%).

2.5 EMPIRICAL RESEARCH IN LITHUANIA

234 academic teachers from 10 Lithuanian higher education institutions (Vytautas Magnus University, Mykolas Riomeris University, Kaunas University of Technology, Aleksandras Stulginskis University, Šiauliai University, Kauno kolegija/University of Applied Sciences, Forestry and Environment Engineering College, Šiauliai State College, Alytaus kolegija/University of Applies Sciences, Vilniaus kolegija/University of Applied Sciences) participated in the research. The questionnaires were anonymous and sent around by Internet.

The opinions of teachers are presented in the tables below. The analysis was made by applying mathematic or percentage presentation. The questionnaires were processed by statistical and/or graphic presentation. Descriptions of the tables are limited to the most frequent responses which have the highest statistical significance. Open questions are presented as collected responses. Statements and descriptions of individual questions referring to answers of respondents' have been processed as well.

I Questions related to the teaching/learning process

1. Which are according to your opinion the main advantages of student-centred learning (1 - very important, 2 - important, 3 - moderately important, 4 - of little importance, 5 – unimportant):

	Proposition	1	2	3	4	5
1.	Motivation of students	156	64	10	0	4
2.	Possibility that students learn at their own pace	60	122	44	6	2
3.	Being more focused upon learning	122	86	22	4	0
4.	Respecting different individuals	104	102	18	10	0
5.	Increase of confidence	117	91	18	6	2

6.	Partnership between teachers and students	134	78	18	4	0
7.	More responsibility and commitment	125	76	25	8	0
8.	Other (please describe)					

The most important advantages of student-centred learning are:

- motivation of students: 156 - 66.7 % very important and 64 - 27.4 % important: 94.1 %
- partnership between teachers and students: 134 (57.3 %) very important and 78 (33.3 %) important: 90.6 %
- respecting different individuals: 104 (44.4 %) very important and 102 (43.6 %) important: 88 %

Less important aspects for the respondents were: more responsibility and commitment: 125 (53.4 %) very important and 76 (32.5 %) important, the ability to work at ones own pace: 60 (25.6 %) very important and 122 (52.1 %) important.

2. Which of the below methods do you include in your teaching (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never):

	Proposition	1	2	3	4	5
1.	Problem-based learning	49	105	52	25	3
2.	Individual or small group based activities	100	79	45	8	2
3.	In-class discussions	99	80	47	8	0
4.	Classroom workshops	22	69	78	38	27
5.	Group presentations	60	88	53	19	14
6.	Projects	36	58	65	55	20
7.	Solving practical problems	107	83	30	11	3
8.	Cooperating in research activities	16	54	82	67	15
9.	Quizzes	44	42	63	54	31

11.	Use of the case method	65	87	61	20	1
12.	Use of role plays	25	23	58	55	73
13.	Collaborative paper assignments	53	49	65	36	31
14.	Web-conferencing environment in distance education	45	59	57	46	27
15.	Other (please describe):	"Critically disposed friend", individual demand, , T-S, American Army, Knowledge Map, Films				

The most frequent methods used by Lithuanian teachers are:

- Solving practical problems: very frequently 107 (45.7 %), frequently 83 (35.5 %): 190 (81.2 %)
- Individual or small group based activities: very frequently 100 (42.7 %), frequently 79 (33.8 %): 179 (76.5 %)
- In-class discussions very frequently 99 (42.3 %), frequently 80 (34.2 %): 179 (76.5 %)
- Problem-based learning very frequently 49 (20.9 %), frequently 105 (44.9 %): 154 (65.8 %)
- Use of the case method very frequently 152 (27.8 %), frequently 87 (37.2 %): 43 (65 %)
- Group presentations: very frequently 60 (25.6 %), frequently 88 (37.6 %): 148 (63.2 %)

Methods which are less popular are: collaborative paper assignments very frequently 53 (22.6 %), frequently 48 (20.5 %); web-conferencing environment in distance education very frequently 45 (19.2 %), frequently 59 (25.2 %);

The respondents occasionally or rarely use such methods as classroom workshops, cooperating in research activities and projects.

31.6 % of respondents never use role plays.

3. How do you try to involve students who do not seem to be interested in student-centred learning? Please describe with a couple of words.

Respondents answer as follows:

- Involve in discussion – 5.7 %;
- Additional more complicated tasks – 3 %;
- Teamwork – 31.8 %;
- Personal training – 23.1 %;
- Motivation (pay more attention to attendance) – 7.8 %;
- Group presentations – 4.8 %;
- Project work – 4.6 %;
- Motivational conversations about the necessity of learning – 13.8 %;
- Individual/practical tasks – 43.5 %;
- Do not motivate – 10.8 %.
- Try to arouse their interest – 5 %

4. *Can you support student diversity and individual learning needs by (1 – yes, 2 – no, 3 – I don't know):*

	Proposition	1	2	3
1.	Offering students additional consultations/advice	231	3	0
2.	Offering students individual examination terms (beside the terms which are defined by the University calendar)	143	83	8
3.	Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results	225	3	6
4.	Enabling students to accelerate their studies (= to finish their studies in 2 years instead of 3)	80	51	103

5.	Enabling students to prolong their studies (= to finish their studies in 2 years instead of 1 year)	157	18	59
6.	Helping foreign students who do not speak the national language	154	49	31
7.	Using special support measures that help students from disadvantaged backgrounds?	143	24	67
8.	Studying either on campus or at a distance	145	33	56
10.	Other (please put down):			

The most frequently used methods of supporting students are:

- Offering students additional consultations/advice – 231 (98.7 %);
- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results – 225 (96.2 %);
- Enabling students to prolong their studies (= to finish their studies in 2 years instead of 1 year) - 157 (67.1 %);
- Helping foreign students who do not speak your national language – 154 (65.8 %);
- Studying either on campus or at a distance – 145 (62 %);
- Offering students individual examination terms (beside the terms which are defined by the University calendar) and using special support measures that help students from disadvantaged backgrounds – 143 (61.1 %).

102 from 234 respondents (43.6 %) don't know if they can enable students to accelerate their studies.

5. *How do you support students when they find teaching/learning activities difficult (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)*

	Proposition	1	2	3	4	5
1.	I explain the topic again	57	91	42	31	13
2.	I tell them to read additional literature	75	89	59	7	4
3.	I have no time to repeat things	6	53	40	59	76
4.	I am looking for new study methods	55	98	68	8	5
5.	Other:					

The most popular answers have been:

- Suggesting students to read additional literature - 75 (32.1 %) very frequently and 89 (38 %) frequently: 164 (70.1 %)
- Looking for new methods - 55 (23.5 %) very frequently and 98 (41.9 %) frequently: 153 (65.4 %)
- Explaining the topic again - 57 (24.4 %) very frequently, 91 (38.9 %) frequently: 148 (63.2 %).

6. Which typical study materials do you introduce to support students? (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)

	Proposition	1	2	3	4	5
1.	Textbook	99	71	41	21	2
2.	Additional slides	94	57	39	32	12
3.	List of additional literature	85	119	29	1	0
4.	Research articles	61	83	65	20	5
5.	Popular scientific literature	38	68	83	35	10
6.	Statistics	45	57	54	47	31
7.	Other (please describe with a couple of					

	words):	

The most typical study materials used by Lithuanian teachers to support students are:

- Additional literature very frequently 85 (36.3) %, frequently 119 (50.9 %): 204 (87.2 %)
- Textbooks 99 (42.3 %), frequently 71 (30.3 %): 170 (72.6 %)
- Additional slides: 94 (40.2 %) very frequently, 57 (24.4 %) frequently: 151 (64.5%)

7. Do you ever ask students if they have enough time for studies? If you find that is not enough, what do you do?

Lithuanian teachers use:

- Individual conversations with students – 20.5 %;
- Questioning – 10.3 %;
- Students' assessment results help to identify this – 8.9 %
- Students tell about the lack of time – 6.5 %;

Teachers think that students have enough time for studies, but they pay too little attention to it and are not motivated to use study time effectively (9.9 %).

To help students, teachers apply these approaches:

- Extended task performance time – 20.1 %;
- Additional consultations – 10.2 %;
- Estimate self-study hours when preparing independent study assignments for students – 3 %;
- Set up a schedule for presenting individual assignments - 3 %;
- If students do not have enough time, teachers suggest to pay more attention to time management, working with deadlines, discussing – 13.7 %;
- Use a cumulative assessment – 3 %.

8. Do you ever take students to:

- Libraries – 63 (26. 9 %)

- Museums – 25 (10.7 %)
- Ask them to describe a case from their work place – 120 (51.3 %)
- Other (please describe with a couple of words): – 114 (48. 7 %)

Other forms teachers listed were exhibitions, excursions to business enterprises, excursions, open lessons, hospitals.

9. How do you show that you value students? (Please describe with a couple of words): Teachers show it by:

- Listening to students' opinion and taking it into account – 16.9 %;
- Applying to students by 'you" (which is specific polite plural form of the Lithuanian pronoun) – 19 %;
- Respectful behavior – 16.2 %;
- Constructive and polite communication – 21.6 %;
- Approaching a student as an equal partner – 14.4 %;
- Other (praise students for their correct solutions, good ideas etc.) – 20 %.

10. Which are the most frequent problems that you face when using the student-centred approach? (1 – yes, 2 – no, 3 – I don't know):

	Proposition	1	2	3
1.	Strict syllabus that does not allow student-centred approach	57	123	54
2.	No interest in the university	28	120	86
3.	Lack of knowledge and skills about student-centered learning	34	135	65
4.	Study programs are not being able to change quickly	73	91	70
5.	Other (please put down)			

73 (31.2 %) lecturers claim that study programmes cannot be changed quickly, 57 (24.4 %) say that strict syllabus does not allow student-centred approach and 34 (14.5 %) university teachers indicated that they do not have enough knowledge and skills about the student-centred teaching/learning method.

11. Please describe two cases of good practice of student-centred learning (either good practice that you use or good practice that you have heard of):

Teachers provided very different answers but it is possible to group them as follows:

- Selection of authentic tasks incorporating real-world problems – 54.5 %;
- Introduction of the learning outcomes of study program and subject – 51.5 %;
- Introduction of the teacher's role and description of teaching/learning methods – 49.3 %;
- Introduction of integrated tasks and reporting time of them – 53 %;
- Projects and problem based method, reflection – 54.5 %;
- Consultation of students – 49.2 %;
- Active teaching methods – 55.2 %;
- Application of student self-evaluation/assessment methods – 7.7 %;
- Real business situations – 13.4 %;
- Practical teamwork activities – 19.3 %;
- Discussions to find out students' opinions – 33.1 %;
- Taking students to exhibitions and giving them tasks – 16.2 %
- Use of role plays – 9.3 %;
- Case study – 36.2 %;
- Concept maps – 3.1 %.

II Questions related to the feedback

12. Select the evaluation methods which you use (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Method	1	2	3	4	5	6

Content-heavy	17	40	83	48	33	13
Summative	192	38	4	0	0	0
Flexible	22	57	81	24	35	15
Criteria referenced	204	19	3	5	1	2
Formative	12	18	58	22	54	70
Other (please put down)						

When asked about assessment methods, respondents identified:

- Summative assessment method 192 (82.1 %) very frequently and 38 (16.2 %) frequently: 230 (98.3 %);
- Criteria referenced approach as the most common one 204 (87.2 %) very frequently and 19 (8.1 %) frequently: 223 (95.3 %);
- Flexible assessment method is seen as less important and is very frequently used only by 22 (9.4 %) and frequently by 57 (24.4 %) respondents: 79 (33.8 %).

13. Evaluate your assessment - feedback provided to students: (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Proposition	1	2	3	4	5	6
Do you make feedback, comment directed towards the task	125	89	20	0	0	0
Do you discuss strengths and weaknesses	109	81	26	9	3	6
Explain mistakes and give advice how to improve	141	83	5	3	0	2
help to focus on skills relating to a deep approach to learning	86	89	45	3	8	1
Other (please explain)						

The above table indicates that teachers:

- explain mistakes and give advice how to improve 141 (60.3 %) very frequently, 83 (35.5 %) frequently): 224 (95.7 %);

- make feedback-comments about the task very frequently 125 (53.4 %) and frequently 89 (38 %): 214 (91.5 %);
- discuss strengths and weaknesses 109 (46.6 %) very frequently and frequently 81 – 34.6 %): 190 (81.2 %).

14. How do you provide for students' word in the assessment?

Teachers provide for students' word by:

- Students can come and ask for explanation of the marks – 210 (89.7 %)
- Students negotiate self-assessment grades - 88 (37.6 %)
- Students suggest self-assessment grades – 52 (22.2 %)
- Other (please explain) – 18 (7.6 %) (Assessment is discussed – 11 (4.7 %); sometimes teachers apply student self-evaluation approach – 7 (3 %).

15. How do you try to reduce students' anxiety before examinations?

Teachers provided the following answers:

- I speak with students and try to relax them – 134 (57.3 %)
- I ask them questions that help repeat the topic – 156 (66.7 %)
- I tell students to think logically – 92 (39.3 %)
- I tell them to calm down – 44 (18.8 %)
- Other (please describe) – 14 (6 %) teachers use cumulative assessment method where an exam result covers only (in some cases) 20 % of the final grade/score; advice how to study; teach stress management skills.

16. How long does it take before students receive feedback?

- One week - 108 (46, 2 %)
- Two weeks – 24 (10.3 %)
- One month – 1 (0.4 %)

- Other 100 (42.7 %) (2-3 days, the same day, 5 days).

17. Are there procedures for students of your University to appeal decisions regarding their academic attainment or progression?

- Yes – 162 (69.2 %)
- No – 4 (1.7 %)
- Don't know – 32 (13.7 %)
- Other – 4 (1.7 %) (Procedure is not clearly described (it can be challenged only during the process but not after the final evaluation).

18. Have any of the teachers tried to introduce student-generated examination questions? If yes, how were the results?

- Yes – 5.6 %.
- No – 53.9 %
- I don't know – 27 %.
- Other – 13.5 %.

III Questions related to curriculum

19. Are students of your University consulted on curriculum content? (Describe how this is happening)

Respondents pointed out that:

- Students participate in curriculum development – 57.5 %:
- Students participate in improving the already prepared study programs. They provide suggestions about the sequence of the subjects during the study process, clarify what knowledge or skills they feel short in studies of different subjects (it usually happens after internships/practical trainings), they offer how to improve organization of practical trainings, and so on.

- Employers, program organizers and Alumni (former students) are involved in the development of the study program.
- Students are members of Study Program Committee.
- Students inform about their needs during student-staff meetings.
- Do not know if it is consulted 33 %
- No – 9.4%.

20. Are students of your University consulted on the teaching methods that are included in the curriculum? (Briefly describe how this is happening).

It happens by:

- Students are involved in consultation about teaching methods and ways of evaluating learning outcomes – 59 %.
- Round table discussions.
- Surveys.
- Students are involved in assessment, but not in choice of teaching methods.
- Yes, they are involved.
- Dissemination of good practice.
- Seminars for teachers.
- Discussions at the beginning of the course.
- Alumni can recommend.
- 24 % of respondents don't know.

21. Are students of your University consulted when learning outcomes in the curriculum are designed? (Briefly describe how this is happening)

- 44.3 % of respondents don't know**.**
- 21.6 % claim that there are no consultations.
- 34 % of all respondents noted, that students were involved in consultation (in discussions, provided comments and suggestions).

22. Are students of your University consulted on assessment methods included in the curriculum? (Briefly describe how this is happening)

- I do not know if students were consulted on assessment methods included in curriculum – 47.9 %.
- Yes, they were consulted – 25 % (The choice of teaching methods is teacher's responsibility, but teachers discuss with students if they understand them).

IV Questions related to professional development programmes

23. Does your institution have a regular professional development programme for teaching staff?

- Yes 136 (58.1 %)
- No 18 (7.7 %)
- I don't know 80 (34.2 %)

24. Do you think that student-centred learning encourages deep learning and academic engagement? Justify.

Most of the respondents (79.9 %) see the connection between student-centred learning and academic engagement because it:

- Increases responsibility and motivation to strive for better results – 50 (21.40 %).
- Student-centred learning helps develop teamwork skills and independence – 6 (2.6 %).
- Teachers achieve better results – 8 (3.4 %).
- Student-centred learning is more practical – 2 (0.9 %).
- This kind of teaching allows the choice of different teaching and learning methods – 10 (4.3 %).
- Consultations – 4 (1.7 %).

- Partnership between a teacher and a student – 6 (2.6%).
- Possibility for self-expression – 4 (1.7 %).

25. Do you believe that student-centred learning means a link that will improve relationships between students and teachers? Justify.

Teachers think that:

- It improves relations – 83.1 %
- No – 7.7 %
- I don't know – 4.6 %
- Other – 4.6 %.

2.6 COMPARATIVE ANALYSIS OF QUESTIONNAIRES

Questionnaires were sent to a large number of teachers employed in the universities and/or faculties and some colleges in Slovenia, Poland and Lithuania. We received 634 answers that were filled in by:

100 university teachers from 10 universities/faculties/colleges in Slovenia

300 university teachers from 22 universities in Poland, and

234 university teachers from 10 Lithuanian universities

1 The main advantages of student-centred learning

The majority of *Slovenian* teachers think that the main advantages of student-centred learning are:

- Increased motivation of students (72 % very important, 14 % important: 86 %)
- More responsibility and commitment (48 % very important, 33 % important: 81 %)
- Increase of confidence (38 % very important, 40 % important: 78 %)

Polish teachers find most important:

- Partnership between teachers and students (291 very important + 9 important = 300 – 100 %)
- Being more focused upon learning (287 very important + 13 important = 300 – 100 %)
- Increased motivation of students (272 very important + 17 important = 289 – 96 %).

Lithuanian teachers:

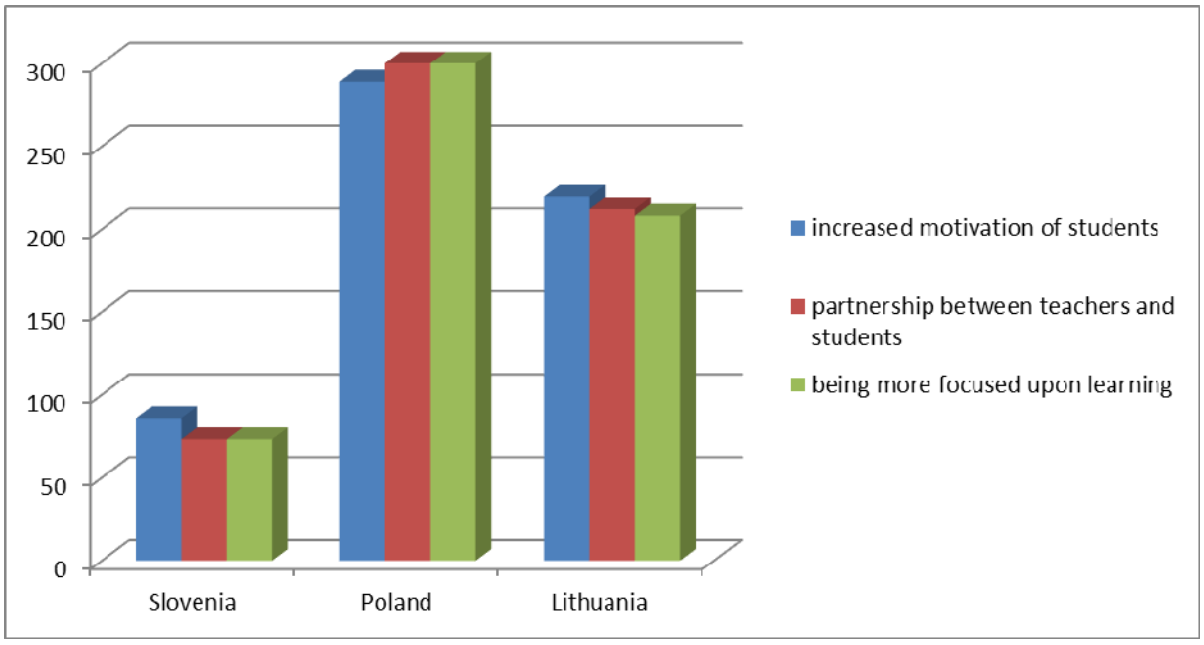
- Motivation of students: 156 - 66.7 % very important and 64 - 27.4 % important: 94.1 %
- Prtnership between teachers and students: 134 (57.3 %) very important and 78 (33.3 %) important: 90.6 %
- Respecting different individuals: 104 (44.4 %) very important and 102 (43.6 %) important: 88 %

Teachers in the participating countries think that the main advantages of the student-centred learning are:

1) Increased motivation of students 86 + 289 + 220 = 595: 93,9 %
2) Partnership between teachers and students 73 + 300 + 212 = 585: 92 %
3) Being more focused upon learning 73 + 300 + 208 = 581: 92 %

Table 1: Advantages of SCL

	Slovenia	Poland	Lithuania	Total
increased motivation of students	86	289	220	595
partnership between teachers and students	73	300	212	585
being more focused upon learning	73	300	208	581



Teachers in all three countries believe that increased motivation of students is the main advantage of student-centred learning. The teachers also think that an important advantage is partnership between teachers and students and that student-centred learning makes students more focused upon learning.

2 The methods that teachers include in their teaching

Slovenian teachers include in their teaching especially:

- In-class discussions (42 % very frequently and 37 % frequently: 79 %)
- Solving practical problems (50 % very frequently and 26 % frequently: 76 %)
- Individual or small group based activities (39 % very frequently and 36 % frequently: 75 %)
- Problem – based learning (34 % very frequently and 32 % frequently: 66 %).

Polish teachers most commonly use methods:

- In-class discussions – 300 (100 %)
- Group presentations –300 (100 %)
- Use of role plays – 300 (100 %)
- Classroom workshops – 300 (100 %)
- Projects – 279 very frequently and 21 frequently – 300 (100 %)
- Problem-based learning – 276 very frequently and 24 frequently – 300 (100 %)

Lithuanian teachers use the following teaching methods:

- Solving practical problems: very frequently 107 (45.7 %), frequently 83 (35.5 %): 190 (81.2 %)
- Individual or small group based activities: very frequently 100 (42.7 %), frequently 79 (33.8 %): 179 (76.5 %)
- In-class discussions very frequently 99 (42.3 %), frequently 80 (34.2 %): 179 (76.5 %)
- Problem-based learning (very frequently 49 (20.9 %), frequently 105 (44.9 %): 154 (65.8 %)
- Use of the case method (very frequently 65 (27.8 %), frequently 87 (37.2 %): 43 (65 %)
- Group presentations: very frequently 60 (25.6 %), frequently 88 (37.6 %): 148 (63.2 %)

The most popular methods which teachers of the three countries include in their teaching are:

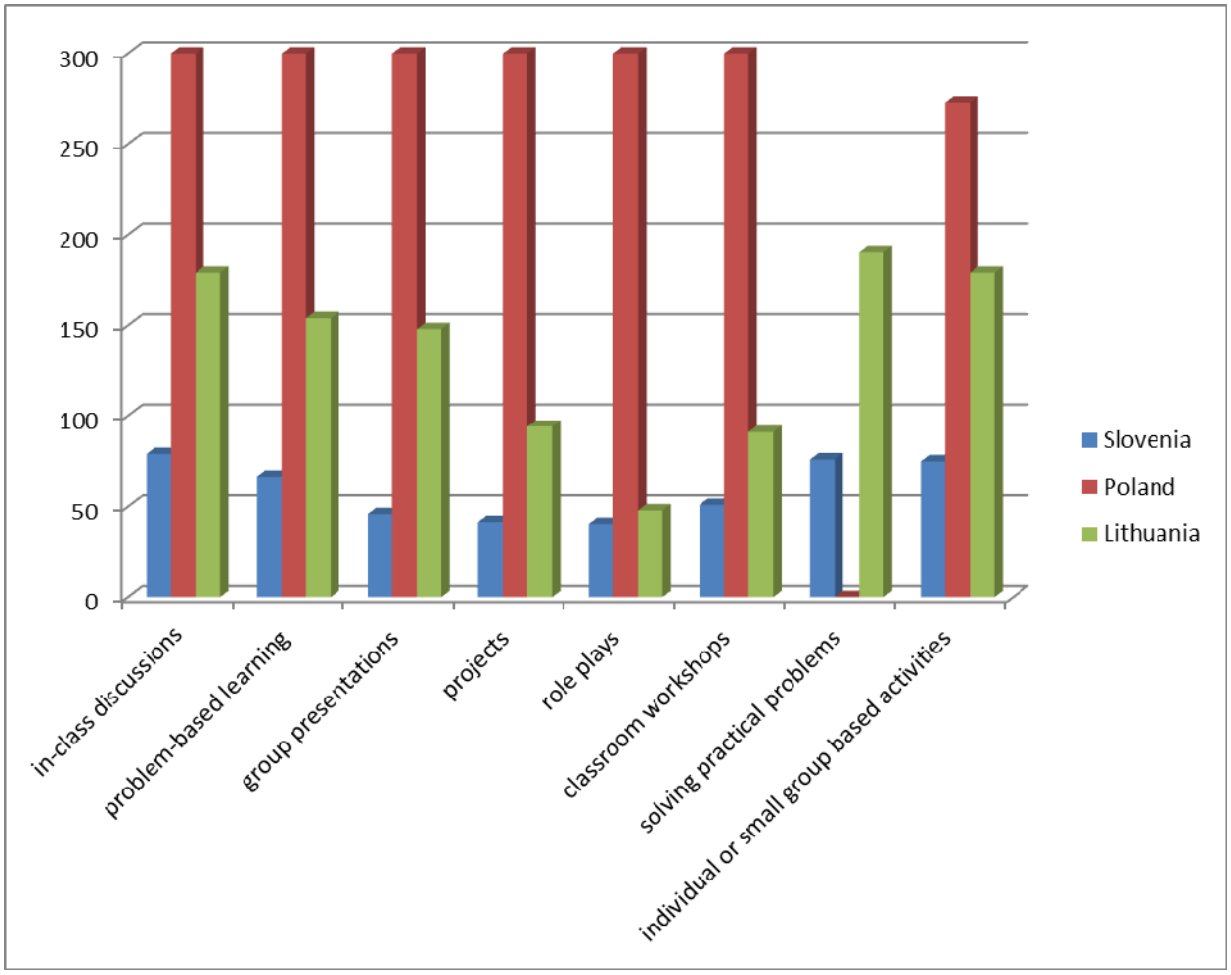
- In-class discussions (79 + 300 + 179 = 558 – 88 %)
- Problem-based learning (66 + 300 + 154 = 520 – 82 %).
- Group presentations (46 + 300 + 148 = 494 – 78 %)
- Projects (41 + 300 + 94 = 435 - 69 %)

- Role plays (40 + 300 + 48 = 388 - 61 %)
- Classroom workshops (51 + 300 + 91 = 442 - 70 %)
- Solving practical problems (76 + 190 = 266 – 41.9 %)
- Individual or small group based activities (75 + 273 + 179 = 527 – 83 %)

Among the most frequently used methods are in-class discussions, individual or small group based activities and problem-based learning. Also group presentations, classroom workshops, projects and role plays are popular in all three countries.

Table 2: Teaching methods

	Slovenia	Poland	Lithuania	Total
in-class discussions	79	300	179	558
problem-based learning	66	300	154	520
group presentations	46	300	148	494
projects	41	300	94	435
role plays	40	300	48	388
classroom workshops	51	300	91	442
solving practical problems	76	-	190	266
individual or small group based activities	75	273	179	527



3 The third question asked how teachers try to involve students who do not seem to be interested in student-centred learning. They were also asked to describe it with a couple of words

Slovenian teachers try to involve students who do not seem to be interested in the student-centred learning primarily by:

- Including contemporary cases that arouse interest of students (23 %)
- Different ways of motivating students (22 %)
- Discussions (15 %).

Polish teachers try to involve students who do not seem to be interested in the student-centred learning primarily by:

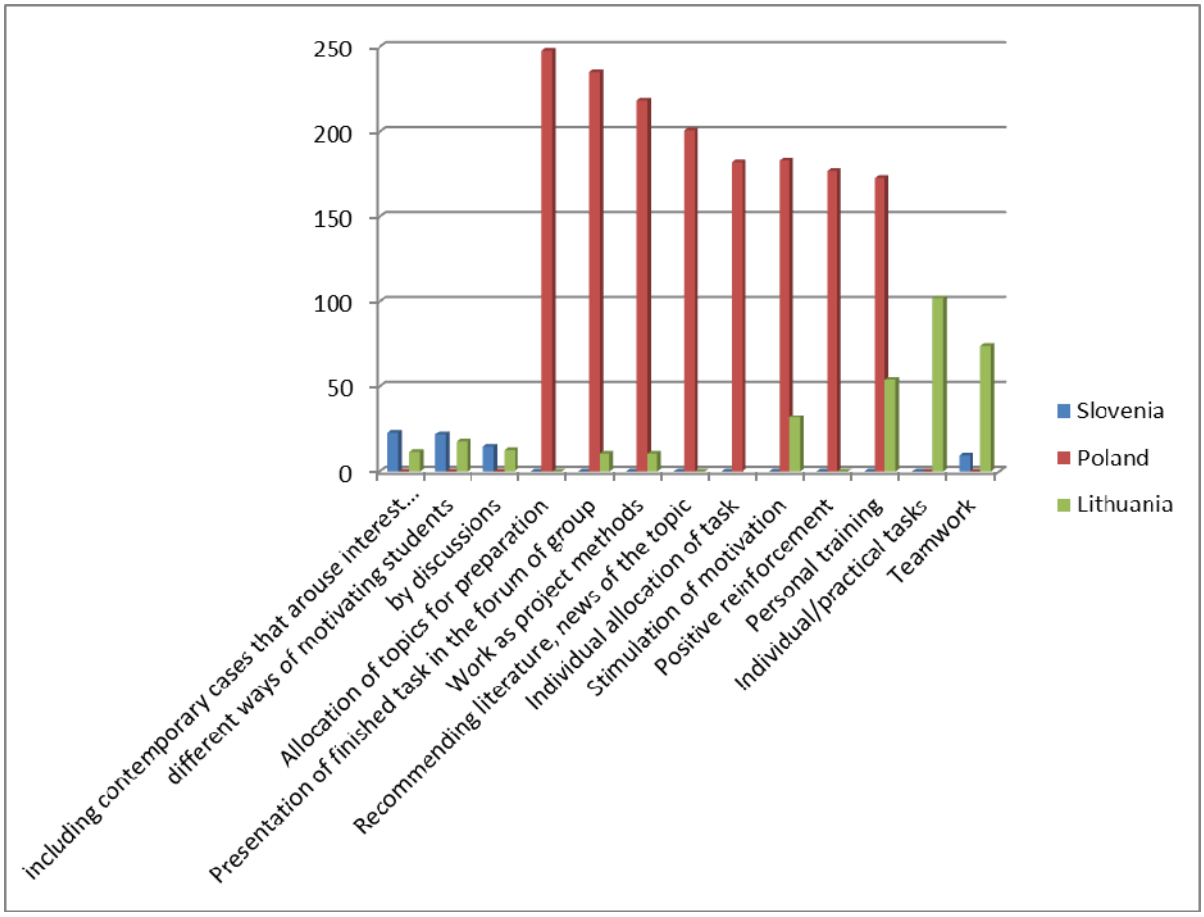
- Allocation of topics for preparation: 248 (82.6 %)
- Presentation of finished task in the forum of group: 235 (78.3%)
- Work as project methods: 218 (72.6%)
- Recommending literature, news of the topic: 201 (67%)
- Individual allocation of task: 182 (61.3%)
- Stimulation of motivation: 183 (61%)
- Positive reinforcement: 177 (59%)
- Personal training: 173 (57.6%)

Lithuanian teachers:

- Individual/practical tasks – 102 (43.5 %)
- Teamwork – 74 (31.8 %)
- Personal training – 54 (23.1 %)

Table 3: Involving students who are not interested in SCL

	Slovenia	Poland	Lithuania	Total
including contemporary cases that arouse interest of students	23	-	12	35
different ways of motivating students	22	-	18	40
by discussions	15	-	13	28
Allocation of topics for preparation	-	248	-	248
Presentation of finished task in the forum of group	-	235	11	246
Work as project methods	-	218	11	229
Recommending literature, news of the topic	-	201	-	201
Individual allocation of task	-	182		182
Stimulation of motivation	-	183	32	215
Positive reinforcement	-	177	-	177
Personal training	-	173	54	227
Individual/practical tasks	-	-	102	102
Teamwork	10	-	74	84



Teachers of all three participating countries try to involve students who do not seem to be interested in the student-centred learning. The teachers try to motivate students and/or arouse their interest in different ways. In front of all they speak with students and give them different tasks. Polish students are given different topics, they present the tasks in the class, work on projects, they are recommended that they should read literature and get individual tasks. Lithuanian teachers try to involve students in teamwork or train students individually. Lithuanian teachers include also practical examples.

4 Question number four asked if teachers can support student diversity and individual learning needs

*Slovenian t*eachers support student diversity and individual learning needs mainly by:

- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results (96 %)
- Offering students additional consultations/advice (94 %), and
- Offering students individual examination terms (beside the terms which are defined by the University calendar) 75 %

Polish teachers support student diversity in the following ways:

- Offering students additional consultations/advice: 300 – 100 %
- Offering students individual examination terms: 300 – 100 %
- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results: 300 – 100 %
- Studying either on campus or at a distance: 300 – 100 %

Lithuanian teachers:

- Offering students additional consultations/advice – 231 (98.7 %);
- Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results – 225 (96.2 %);
- Enabling students to prolong their studies (= to finish their studies in 2 years instead of 1 year) - 157 (67.1 %);
- Helping foreign students who do not speak your national language – 154 (65.8 %);
- Studying either on campus or at a distance – 145 (62 %);
- Offering students individual examination terms (beside the terms which are defined by the University calendar) and using special support measures that help students from disadvantaged backgrounds – 143 (61.1 %).

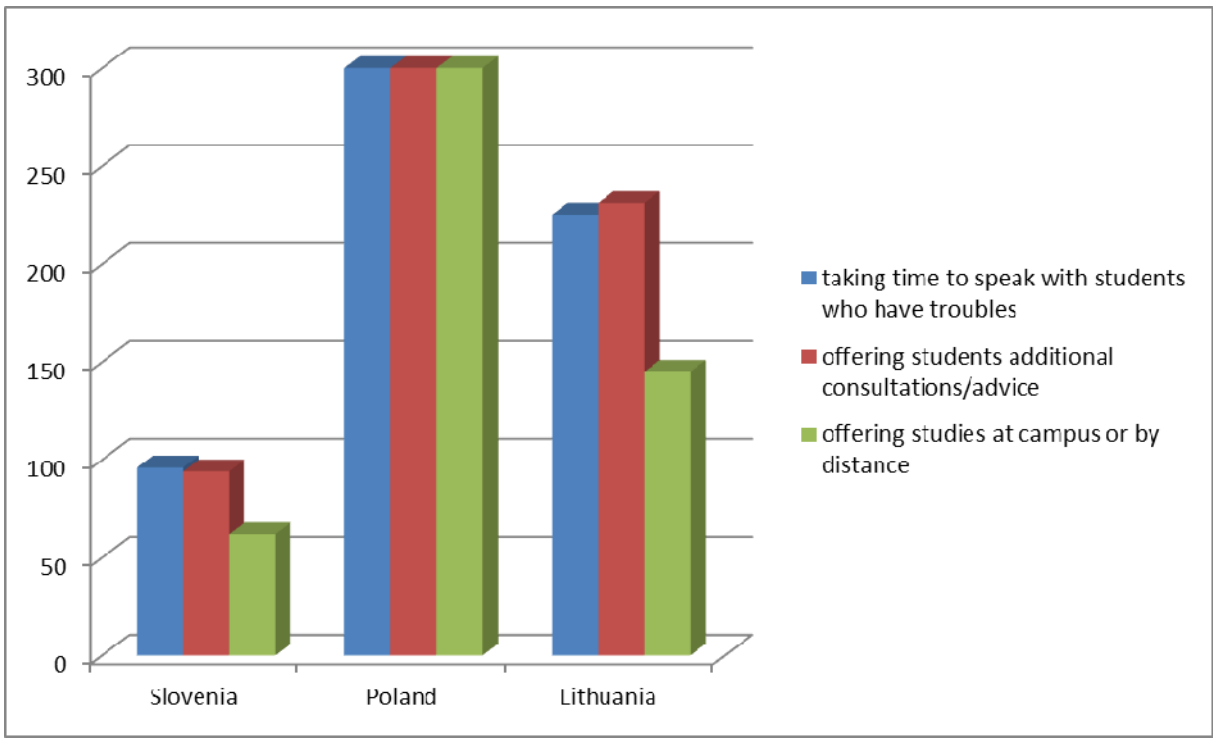
Teachers in all three countries try to support student diversity and individual learning needs in rather similar ways:

1) Taking time to speak with students who have troubles (96 + 300 + 225) =621 – 98 %)
2) Offering students additional consultations/advice (94 + 300 + 231 = 625 – 98.6 %)
3) Offering students individual examination terms (75 + 300 + 143 = 518 – 81.7 %)

4) Offering studies at campus or by distance (62 + 300 + 145 = 507 – 80 %)

Table 4: Supporting individual learning needs

	Slovenia	Poland	Lithuania	Total
taking time to speak with students who have troubles	96	300	225	621
offering students additional consultations/advice	94	300	231	625
offering students individual examination terms	75	300	143	518
offering studies at campus or by distance	62	300	145	507



Teachers use also many other activities to support individual learning needs:

- Teachers of all three countries help foreign students who do not speak the national language
- Slovenian, Polish and Lithuanian teachers offer support to students from disadvantaged backgrounds
- Slovenian and Lithuanian teachers enable acceleration of studies (but Polish do not)
- Polish teachers emphasize also consultations by Internet and inviting students to science conferences.

5 ***How teachers support students who find teaching/learning activities difficult***

Slovenian teachers support students by:

- Explaining the topic again (55 % very frequently, 30 % frequently: 85 %)
- Looking for new study methods (26 % very frequently, 40 % frequently: 66 %)
- Tell them to read additional literature (27 % very frequently, 37 % frequently: 64 %).

Polish teachers:

- Explaining the topic again: very frequently – 280 (93.3%), frequently 20 (6.7%): 300 (100 %)
- 150 academic teachers (50 %) are looking for new study methods, 129 lecturers (43 %) do that often; 279 (93 %)
- 231 (77%) frequently tell students to read additional literature, 7 teachers very frequently 30 (10%); 261 (87%).

Lithuanian teachers:

- Suggesting students to read additional literature - 75 (32.1 %) very frequently and 89 (38 %) frequently: 164 (70.1 %)
- Looking for new methods - 55 (23.5 %) very frequently and 98 (41.9 %) frequently: 153 (65.4 %)
- Explaining the topic again - 57 (24.4 %) very frequently, 91 (38.9 %) frequently: 148 (63.2 %).

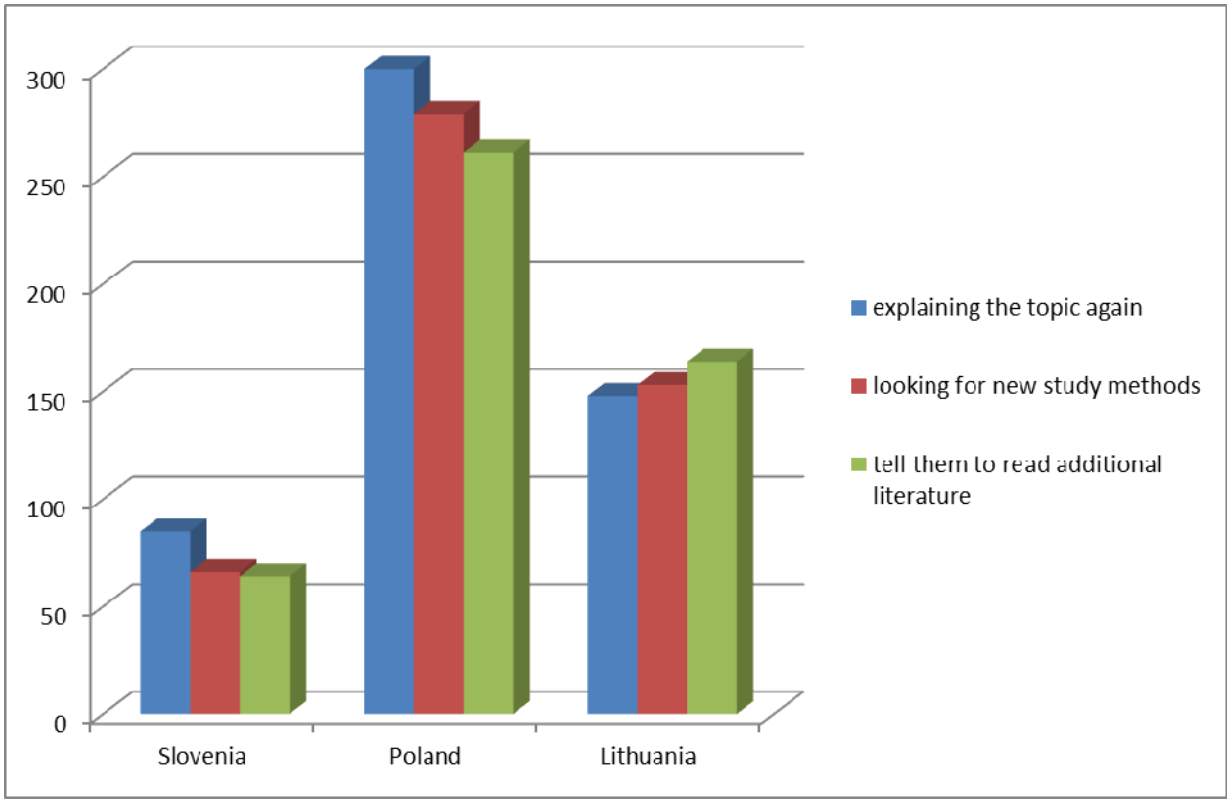
Teachers support students who find learning activities difficult mainly by:

- Explaining the topic again (85 + 300 + 148 = 533 – 84 %)
- Looking for new study methods (66 + 279 + 153 = 498 – 78.6 %)
- Tell them to read additional literature (64 + 261 + 164 = 489 – 77 %).

Table 5: Supporting students who find learning difficult

	Slovenia	Poland	Lithuania	Total
explaining the topic again	85	300	148	533

looking for new study methods	66	279	153	498
tell them to read additional literature	64	261	164	489



It is good that the majority of teachers explain the topic again and that the teachers look for new study methods. On the other side reading of additional literature might not be very useful because this takes a lot of time. It is also rather worrying that quite a number of teachers have no time to repeat study topics.

6 Typical study materials that teachers use to support students

Slovenian teachers mainly offer the following study materials with which they support students:

- Textbooks (49 % very frequently, 22 % frequently: 71 %)
- Additional slides (46 % very frequently, 23 % frequently: 69 %)
- Lists of addtional literature (43 % very frequently, 24 % frequently: 67 %).

Polish teachers offer students in front of all:

- Lists of additional literature, 253 – 84.3 % very frequently and 47 – 15.7 % frequently: 100 %
- Textbooks – 153 (51 %) frequently, 96 (32 %) very frequently: 249 (83 %)
- Additional slides are used frequently by 249 teachers (83 %)

Lithuanian teachers support students with:

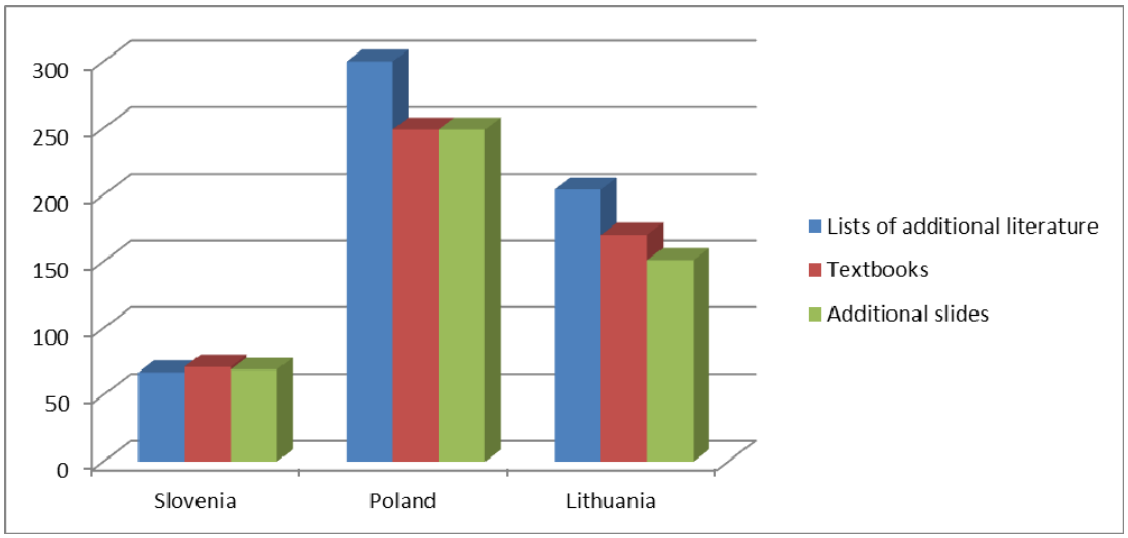
- Additional literature (very frequently 85 (36.3 %), frequently 119 (50.9 %): 204 (87.2 %)
- Textbooks very frequently 99 (42.3 %), frequently 71 (30.3 %): 170 (72.6 %)
- Additional slides: 94 (40.2 %) very frequently, 57 (24.4 %) frequently: 151 (64.5%)

Teachers mainly offer the following study materials with which they support students:

1) *Lists of additional literature (67 + 300 + 204 = 571 – 90 %)*
2) *Textbooks (71 + 249 + 170= 490 - 77.3 %)*
3) *Additional slides (69 + 249 + 151= 469 – 74 %)*

Table 6: Typical study materials with which teachers support students

	Slovenia	Poland	Lithuania	Total
Lists of additional literature	67	300	204	571
Textbooks	71	249	170	490
Additional slides	69	249	151	469



The combination of these resources is good but in student-centred learning we would expect also the use of other supporting materials. Additional literature should not be on the first place of the study materials that support students. Besides, we would expect that teachers would use much more research articles, popular scientific literature and statistical data. Slovenian and Lithuanian teachers still put some importance on the research articles and less on the popular scientific literature but Polish teachers do not. On the other hand Polish teachers emphasize Internet sources that are not very reliable.

7 Do teachers ever ask if students have enough time for studies?

Slovenian teachers ask students if they have enough time for studies (but 10 claim that they do not). If they find that there is not enough time, the teachers

- suggest a time plan 15 %
- suggest different/effective methods for studying 14 %
- suggest that they come to a later/additional examination term 11 %
- explain the student which themes are the most important for the examination 6 %
- repeat the most important parts of the syllabus 6 %
- suggest that students regularly come to lectures and listen intensively 4 % and/or
- adapt lectures and examinations terms 5 %.

Polish teachers:

- I never ask students if they have enough time for studies – 250 (83.3%).
- Sometimes I ask if they have enough time – 35 (11.6%).

Lithuanian teachers*:*

- Extended task performance time – 20.1 %;
- Time management, working with deadlines, discussing – 13.7 %;
- Additional consultations – 10.2 %;

This question gave rather surprising results in Poland where a lot of teachers never ask students if they have enough time for studies (250: 83.3 %). In Slovenia and in Lithuania teachers try to teach students how to make a good time plan and/or teach time

management, suggest different/effective methods for studying, suggest that they come to a later exam term, give additional consultations etc.

8 The teachers were asked if they ever take students to libraries and museums and if they ask students to describe cases from their work place.

Slovenian teachers:

- Ask them to describe a case from their work place: 78 %
- Libraries: 12 %
- Museums 8 %

Polish teachers:

- Speak about their work: 291 (97%)
- Take students to libraries: 201 (67%)
- Take students to museums 54: (18%)

Lithuanian teachers:

- Ask them to describe a case from their work place: 120 (51.3 %)
- Libraries: 63 (26. 9 %)
- Museums: 25 (10.7 %)

Also these answers are surprising. It is good that teachers include in their teaching a lot of cases from the work places of the students (the highest percentage in Poland, the lowest in Lithuania). On the other hand it is hard to believe that teachers do not take students to the library. All the participating institutions have their own libraries so it would not be difficult to take students to the library and show them how to look for materials and teach them information literacy. Maybe teachers expect that librarians will do it. However, it is alarming that in Slovenia and Lithuania so few teachers take care of the connection with the library. Poland is in this view much better than the other two countries. Polish teachers mention also study visits of work places.

9 How teachers show that they value students

Slovenian teachers show that they value students especially by:

- Speak with them 24 %
- Show respect 19 %
- Praise students 11 %
- Offer information also beyond lectures 10 %

Polish teachers

- Assessment of the work entered in the index and cards – 279 (93%)
- Individual verbal commendation – 271 (90.3%)
- Commendation in group – 237 (79%)
- Proposition of common project publication – 139 (46.3%)
- Proposition of conference participation – 133 (44.3%)

Lithuanian teachers

- Constructive and polite communication – 21.6 %;
- Applying to students by 'you" (which is specific polite plural form of the Lithuanian pronoun) – 19 %;
- Listening to students' opinion and taking it into account – 16.9 %;

Teachers show that they value students especially by praising students (high percentage is seen especially in Poland, less in Slovenia and Lithuania), speaking with and listening to students and by different forms of respectful behaviour. Slovenian teachers devote students also their private hours; in Poland teachers propose students common project publication, participation in conferences etc.

10 Which are the most frequent problems that the teachers face when using student-centred approach?

Slovenian teachers:

- Study programs cannot be changed quickly (54 %)
- Lack of knowledge and skills about student-centered learning (46 %)
- Strict syllabus that does not allow student-centred approach (30 %).

Polish teachers:

- Study programmes are not being able to change quickly (300 – 100 %)
- There is no interest in the University (243 – 81 %)
- Huge groups of students (219 – 73 %)
- Lack of knowledge and skills about student-centered learning (144 – 48 %).

Lithuanian teachers:

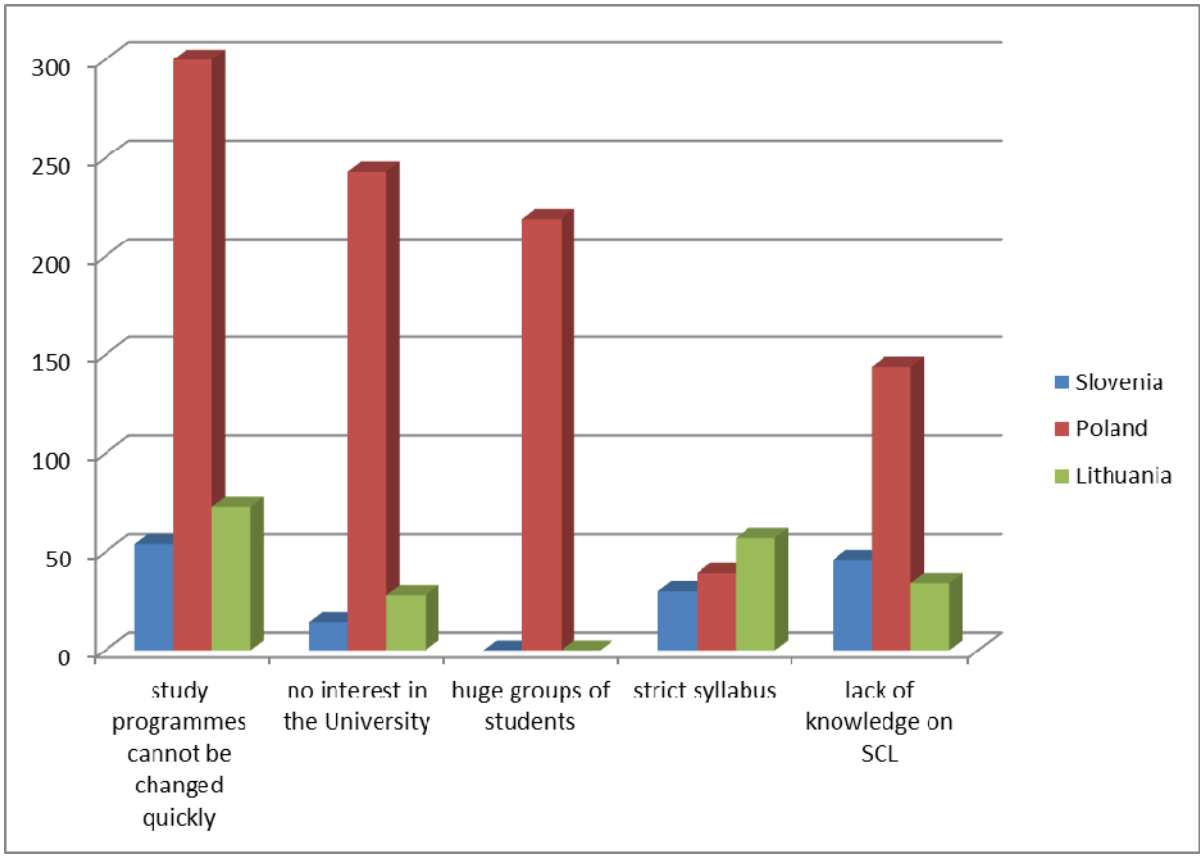
- Study programmes cannot be changed quickly (73 – 31.2 %)
- Strict syllabus does not allow student-centred approach (57 – 24.4 %)
- Lack of knowledge and skills about student-centered learning (34 – 14.5 %).

The most frequent problems that teachers face when using the student-centred approach are:

1) Study programmes cannot be changed quickly (54 + 300 + 73) = 427 – 67.4 %)
2) No interest in the University (14 + 243 + 28 = 285 – 45 %)
3) Huge groups of students (219 – 34.5 %)
4) Strict syllabus that does not allow student-centred approach (30 + 39 + 57 = 126 – 19.8 %).
5) Lack of knowledge and skills about student-centered learning (46 + 144 + 34 = 224 – 35 %)

Table 7: The most frequent problems faced by teachers of SCL

	Slovenia	Poland	Lithuania	Total
study programmes cannot be changed quickly	54	300	73	427
no interest in the University	14	243	28	285
huge groups of students	-	219	-	219
strict syllabus	30	39	57	126
lack of knowledge on SCL	46	144	34	114



The problem that study programs cannot be changed quickly is similar in all three countries, and so is lack of knowledge and skills for student-centred learning. Strict syllabus seems to be a problem in Slovenia and Lithuania. In Poland there are two more difficulties, namely no interest in the university and huge groups of students. All these problems might cause troubles but they could be solved. Within student-centred learning there are a number of teaching/learning methods that do not require the change of the study programs. Also syllabus could be easily made less strict. It is possible to use a number of SCL methods also with huge groups. Lack of knowledge demands additional education of the teachers.

11 Teachers were asked to describe two cases of good practice of student-centred learning (either their own or somebody else's)

Slovenian teachers:

- Working in groups 8 %
- Describing students' problems on their work place 6 %
- Visiting working organisations 4 %

Polish teachers:

- Appealing to the experience of students – 288 (96%)
- Teaching through projects and problems – 281 (93.6%)
- Education in the specialty – 271 (90.3%)
- Lecturers interest in the problems of students – 260 (86.6%)
- Linking theory and practice – 197 (65.6%)
- Analysis of students' expectations associated with a particular subject – 195 (65%)
- Use of remote learning methods -180 (60%)
- Systematic consultation for students – 178 (59.3%)
- Virtual Dean's Office and served on the topics of work, evaluation, etc – 174 (58%)
- Inclusion in the teaching process students' opinions – 158 (52.6%)
- Methods of teamwork – 156 (52%)
- Student volunteering – 151 (50.3%)

Lithuanian teachers:

- Active teaching methods – 55.2 %;
- Selection of authentic tasks incorporating real-world problems – 54.5 %;
- Projects and problem based method, reflection – 54.5 %;
- Introduction of integrated tasks and reporting about them – 53 %;
- Introduction of the learning outcomes of study program and subject – 51.5 %;
- Introduction of the teacher’s role and description of teaching/learning methods – 49.3 %;
- Consultation of students – 49.2 %;

Teachers described a number of cases of good practice: referring to the experiences of students, teaching through projects and problems, interest in the problems of students, linking theory and practice, analysis of students' expectations associated with a particular subject, distance studies, systematic consultations for students, teamwork, volunteering of

students etc. Many of these short descriptions were quoted especially by Polish teachers while Slovenian and Lithuanian teachers described less cases of good practice. Each of the cases might be interesting for a teacher who would like to introduce in his/her teaching an interesting and effective case. These cases are described more in detail in the handbook for teachers.

12 Evaluation methods

Slovenian teachers:

- Criteria-referenced (84 % very frequently, 10 % frequently: 94 %)
- Norm-referenced (85 % very frequently, 8 % frequently: 93 %)
- Content-heavy (40 % very frequently, 41 % frequently: 81 %)

Polish teachers:

- Try to be flexible - 294 (98%) very frequently and 6 (2%) frequently: 100 %
- Formative evaluation – 279 (93%) very frequently and 21 (7%) frequently: 100%
- Summative assessment is used by 273 (91%) very frequently, by 24 (8%) frequently: 92.9 %.

Lithuanian teachers:

- Summative assessment method 192 (82.1 %) very frequently and 38 (16.2 %) frequently: 230 (98.3 %);
- Criteria referenced approach as the most common one 204 (87.2 %) very frequently and 19 (8.1 %) frequently: 223 (95.3 %);
- Flexible assessment method is seen as less important and is very frequently used only by 22 (9.4 %) and frequently by 57 (24.4 %) respondents: 79 (33.8 %).

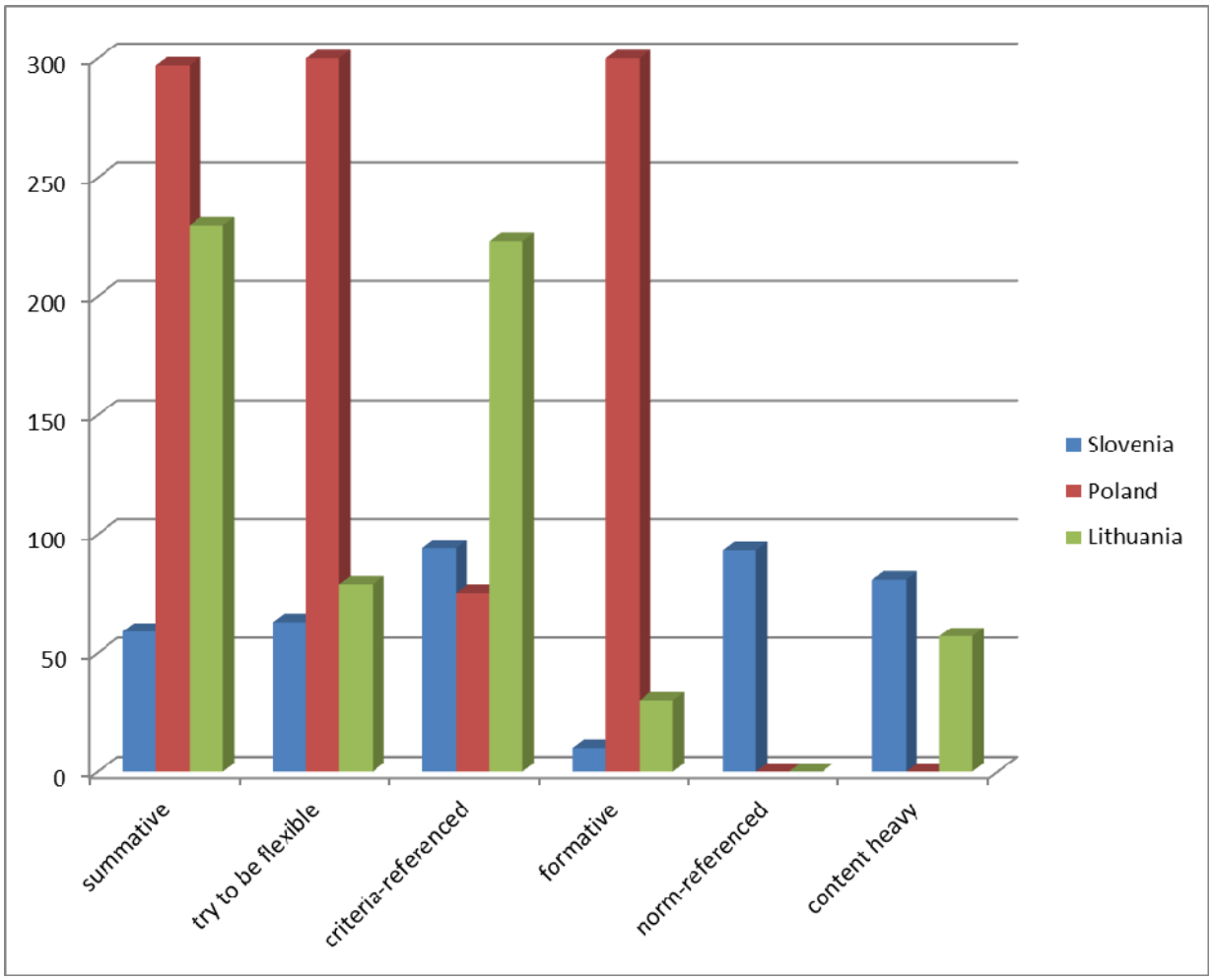
The teachers in all three countries most often use the following evaluation methods:

1) Summative (59 + 297 + 230 = 586 – 92 %)
2) Try to be flexible (63 + 300 + 79 = 442 – 69.7 %)
3) Criteria-referenced (94 + 75 + 223 = 392 – 61.8 %)
4) Formative (10 + 300 + 30 = 340 – 54 %)
5) Norm-referenced (in Slovenia) 93 – 14.7 %

6) Content heavy (in Slovenia and Lithuania) 81 + 57 = 138 – 22 %

Table 8: Methods of evaluation

	Slovenia	Poland	Lithuania	Total
summative	59	297	230	586
try to be flexible	63	300	79	442
criteria-referenced	94	75	223	392
formative	10	300	30	340
norm-referenced	93	-	-	93
content heavy	81	-	57	138



As expected, there is still a lot of summative evaluation but there is also criteria-referenced and flexible assessment. The teachers in all three countries use criteria

referenced and flexible assessment but also other assessment methods. This question was not enough specific so we did not get enough good answers that could provide a more reliable and detailed information – e.g. what exactly a teacher means when he/she performs criteria-referenced or flexible evaluation. To get more reliable information we should make a much more detailed analysis of concrete examination papers.

13 The teachers were asked to evaluate their feedback to students

Slovenian teachers most often make feedback by:

- Explaining mistakes and giving advice how to improve (45 % very frequently, 39 % frequently: 84 %)
- Comments directed towards the task (59 % very frequently, 23 % frequently: 82 %)
- Discussion about strengths and weaknesses (41 % very frequently, 33 % frequently: 74 %).

Polish teachers most frequently make feedback by:

- Comments directed towards the task – (very frequently 70 = 100 %)
  Explaining mistakes and giving advice how to improve frequently 270 (90%)
- Discussing the strengths and weaknesses 129 (43%) very frequently and 108 (36%) frequently: 237 (79) %

Lithuanian teachers:

- Explain mistakes and give advice how to improve 141 (60.3 %) very frequently, 83 (35.5 %) frequently): 224 (95.7 %);
- Make feedback-comments about the task very frequently 125 (53.4 %) and frequently 89 (38 %): 214 (91.5 %);
- Discuss strengths and weaknesses 109 (46.6 %) very frequently and frequently 81 – 34.6 %): 190 (81.2 %).

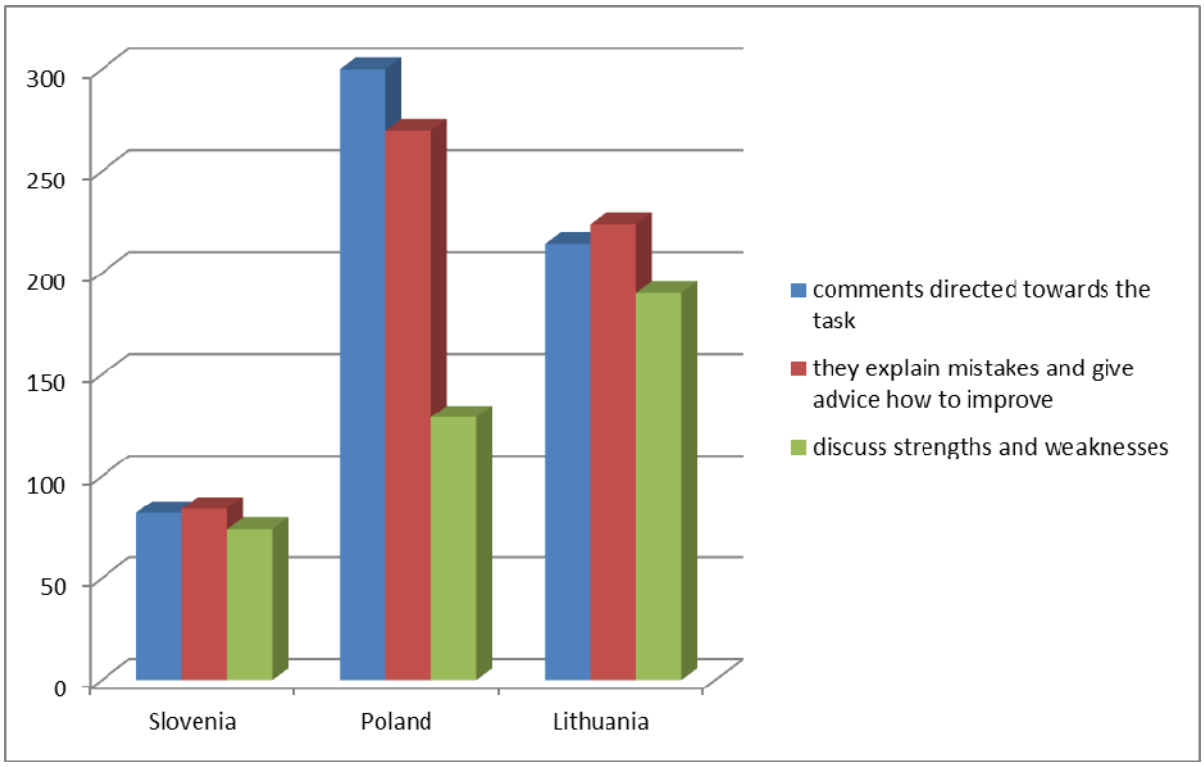
Teachers most often make feedback by:

1) Comments directed towards the task (82 + 300 + 214 = 596 – 94 %)

2) They explain mistakes and give advice how to improve (84 + 270 + 224 = 578 – 91.1 %)
3) Discuss strengths and weaknesses (74 + 129 + 190 = 393 – 62 %)

Table 9: Feedback to students

	Slovenia	Poland	Lithuania	Total
comments directed towards the task	82	300	214	596
explain mistakes and give advice how to improve	84	270	224	578
discuss strengths and weaknesses	74	129	190	393



In all three participating countries teachers give comments, explain mistakes and give advice and discuss strengths and weaknesses. These answers do not offer enough specific information. We would need a much deeper analysis of concrete comments, explanations, advice etc. to get reliable results.

14 How teachers provide for students' word in the assessment

Slovenian teachers provide for students' word in the assessment mainly so that:

- Students can come and ask for explanation of the marks 87 %
- Students suggest self-assessment grades 16 %
- Students negotiate self-assessment grades 4 %

Polish teachers:

- Students receive an assessment from results of adopted scoring exam (108 – 36 %)
- Students can come and ask for explanation of the marks (72 – 24 %)
- Students suggest self-assessment grades (48 – 16 %).

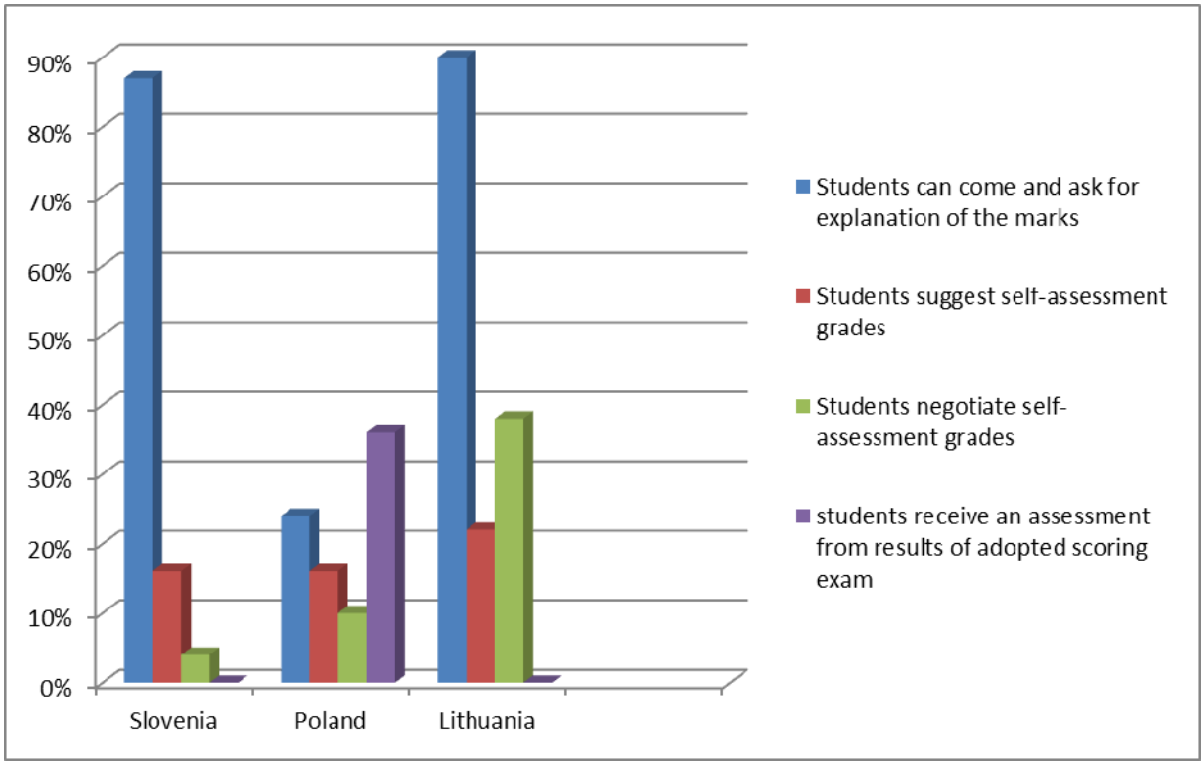
Lithuanian teachers:

- Students can come and ask for explanation of the marks – 210 (89.7 %)
- Students negotiate self-assessment grades - 88 (37.6 %)
- Students suggest self-assessment grades – 52 (22.2 %)

The main method to provide for students' word in the assessment is their asking for explanation of the marks. There are some cases of negotiations for grades and even less self-assessment. Polish students do not seem to have much word in the assessment.

Table 10: Students' word in assessment

	Slovenia	Poland	Lithuania
Students can come and ask for explanation of the marks	87%	24%	90%
Students suggest self-assessment grades	16%	16%	22%
Students negotiate self-assessment grades	4%	10%	38%
Students receive an assessment from results of adopted scoring exam	-	36%	-



15 How teachers try to reduce students' anxiety before examinations

Slovenian teachers try to reduce students' anxiety before examinations by:

- I speak with students and try to relax them 67 %
- I give them questions that help to repeat the topic 64 %
- I tell students to think logically 48 %

*Polish teacher*s:

- I speak with students and try to relax them – 213 (71%)
- Group exams– 84 (28%)
- Defense of the project – 48 (16%)
- I give them questions that help to repeat the topic – 48 (16%)

Lithuanian teachers:

- I speak with students and try to relax them – 134 (57.3 %)
- I ask them questions that help repeat the topic – 156 (66.7 %)
- I tell students to think logically – 92 (39.3 %)

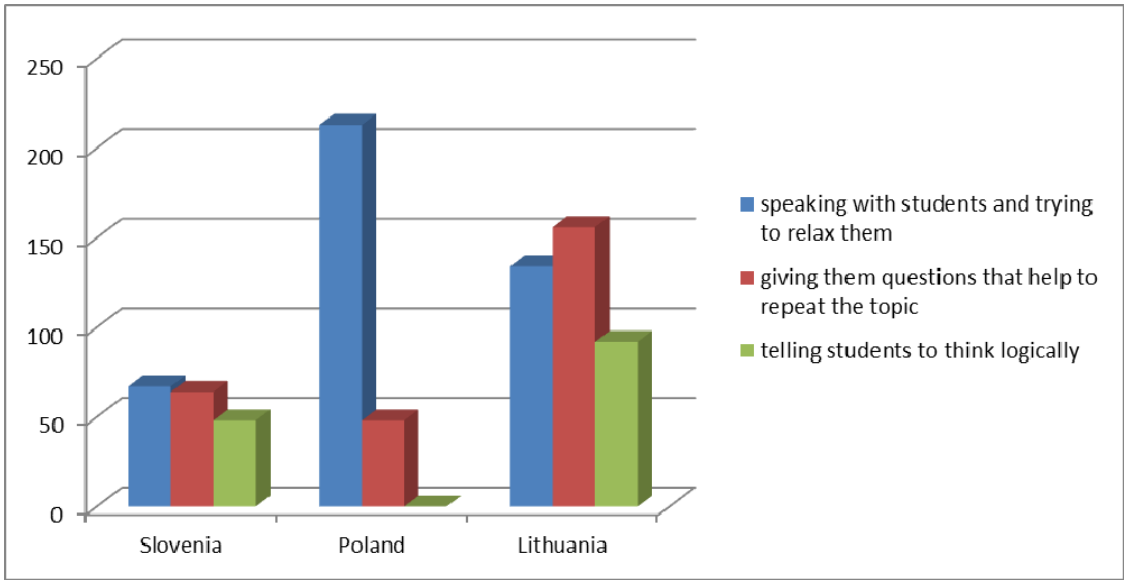
Teachers try to reduce students' anxiety before examinations by:

- Speaking with students and trying to relax them (67 + 213 + 134 = 414 – 65.3 %)
- Giving them questions that help to repeat the topic (64 + 48 + 156 = 268 – 42.3 %
- Telling students to think logically (48 + 92 = 140 – 22 %).

The first two ways are rather good and used in all three countries. Telling the students to think logically has not much sense. Polish teachers suggest several additional possibilities like group exams, projects and exams by Internet. Lithuanian teachers suggest stress management skills and cumulative assessment.

Table 11: Reducing students' anxiety before examinations

	Slovenia	Poland	Lithuania	Total
speaking with students and trying to relax them	67	213	134	414
giving them questions that help to repeat the topic	64	48	156	268
telling students to think logically	48	-	92	140

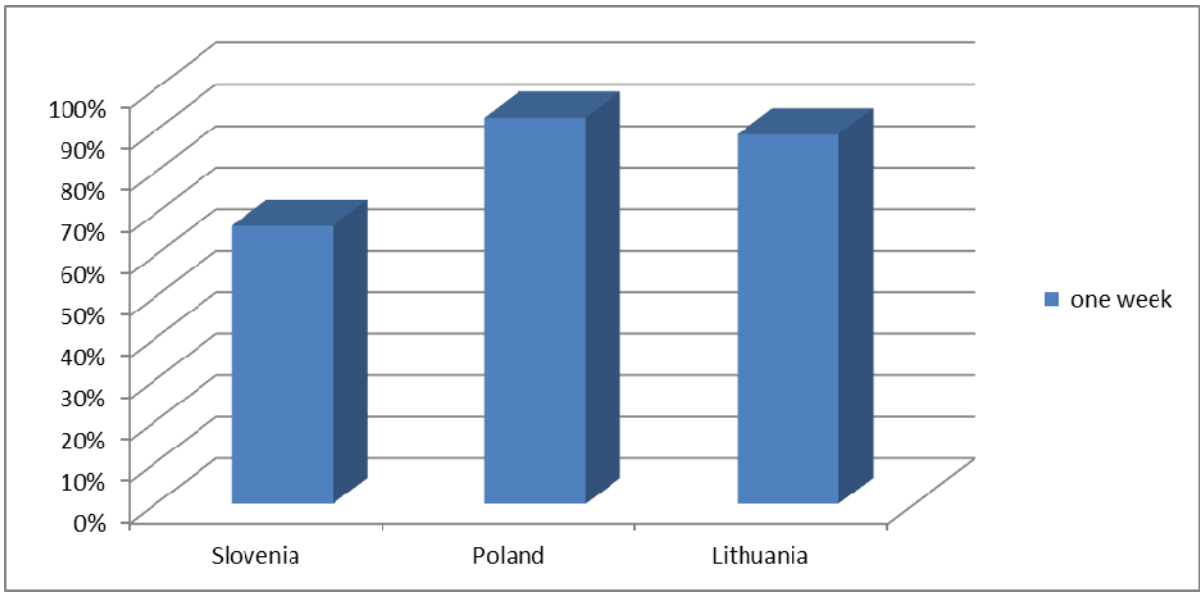


16 How long does it take before students receive feedback?

Slovenia: one week 67 %, *Poland:* one week 280 – 93 %, *Lithuania:* one week or even less (108 + 100 = 208 – 89 %).

Table 12: Feedback time

	Slovenia	Poland	Lithuania	
one week	67%	93%	89%	



In all the universities students receive feedback in about a week – this is rather good and according to the principles of the student-centered learning.

17 Are there procedures for students to appeal decisions regarding their academic attainment or progression?

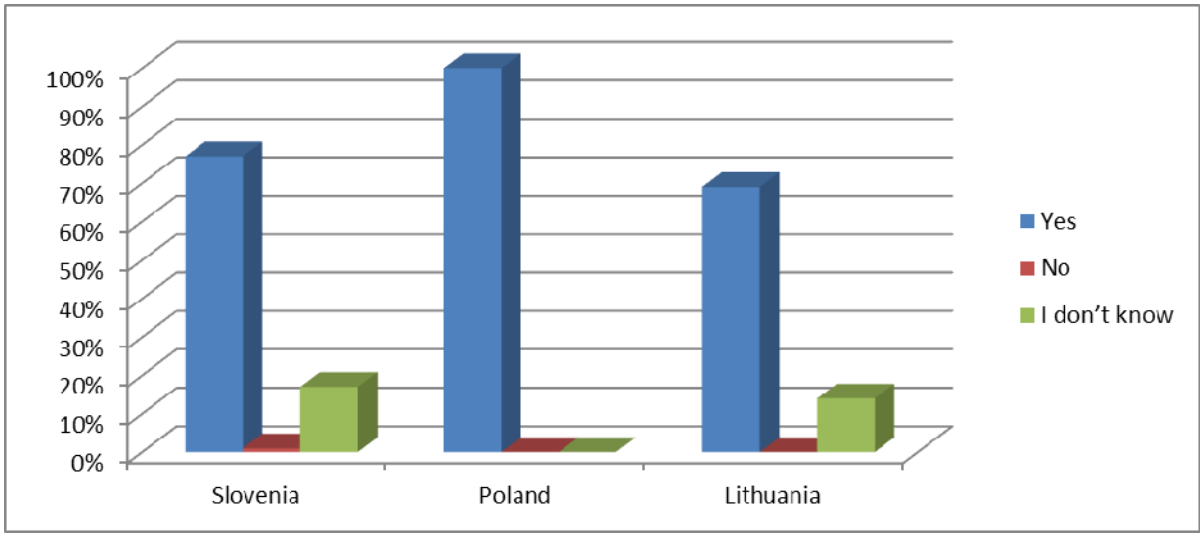
Slovenia: Yes 77 %; no 1 %; I don't know 17 %
Poland: Yes – 300 (100 %)
Lithuania: Yes - 162 (69.2 %), I don't know 32 (13.7 %)

In Poland it is quite clear that there are procedures for students to appeal decisions regarding their academic attainment or progression. The percentage of positive answers

in Slovenia and Lithuania is a bit lower than in Poland. In many universities there are appropriate rules to appeal but it is possible that they are not used in practice.

Table 13: Procedures to appeal decisions

	Slovenia	Poland	Lithuania	
Yes	77%	100%	69,00%	
No	1%	-	1.7%	
I don't know	17%	-	14,00%	



18 Has any of the teachers tried to introduce student-generated examination questions, how were the results?

In Slovenia (8 %) and in Lithuania (5.6 %) just a couple of teachers tried to introduce student-generated examination questions and they say that it functioned well. In Poland this is a usual practice (300 %) and obviously brings good results.

19 Are students consulted on curriculum content?

A number of Slovenian (45 %), Polish (83.3 %) and Lithuanian (57.5 %) teachers claim that students can suggest curriculum contents. Brief explanations show that there are

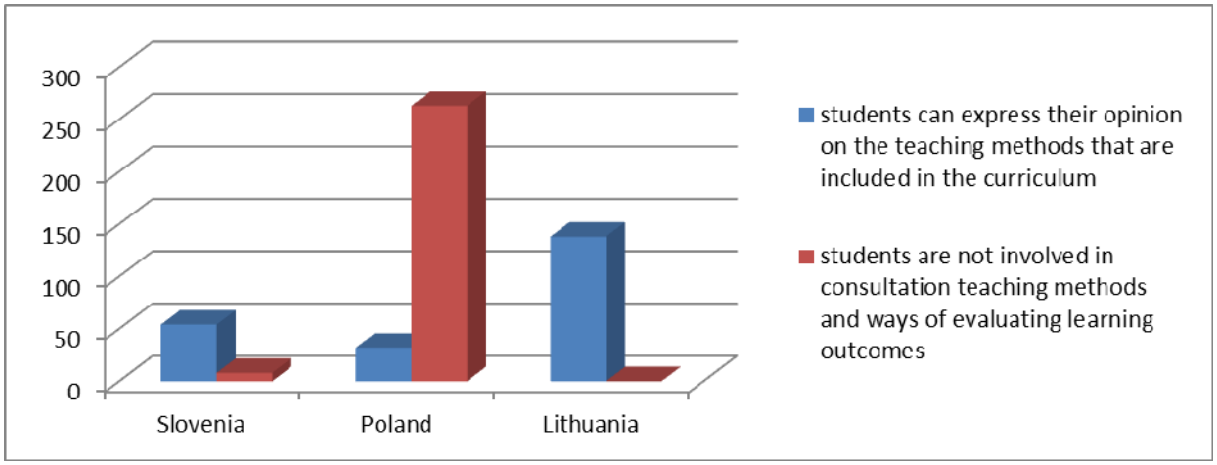
different ways how students are consulted: formal via Senate or Faculty Council, at meetings and individual discussions. The answers show that Slovenian students have less word about the curriculum content than Polish.

20 Are students consulted on the teaching methods that are included in the curriculum?

Slovenian (54 %) and Lithuanian (59 %) students can express their opinion on the teaching methods that are included in the curriculum. Polish students are much less involved in consultation of teaching methods and ways of evaluating learning outcomes (263 – 87.6 %).

Table 14: Students' voice – teaching methods

	Slovenia	Poland	Lithuania	Total
students can express their opinion	54	32	138	224
students are not involved in consultation	8	263	-	271



21 Are students consulted when learning outcomes in the curriculum are designed?

Some Slovenian and Lithuanian students are consulted when learning outcomes in the curriculum are designed (Slovenia 33 %, Lithuania 34 %) but there is no such thing in

Poland. However, the results are rather low also in Slovenia and Lithuania. We expected such answers because design of learning outcomes requires a lot of knowledge.

22 Are students consulted on assessment methods included in the curriculum?

Some Slovenian students are consulted on assessment methods included in the curriculum (42 %) but not so many in Poland (38 – 12.6 %) and in Lithuania (25 %).

Table 15: Students' voice – assessment methods

	Slovenia	Poland	Lithuania	Total
students are consulted on assessment methods included in the curriculum	42%	12.6%	25%	42%
students are not consulted on assessment methods	7%	82.6%		45%

23 Regular professional development programmes for teaching staff

In *Slovenia***,** 59 teachers (59 %) claim that their university has a regular professional development programme for teaching staff.
In *Poland,* 228 lecturers (76 %) said that their universities have regular professional development programmes.
In *Lithuania, 136* (58.1 %) teachers claim that their university has a regular professional development programme for teaching staff.

About half of the teachers in Slovenia and in Lithuania say that universities have regular development programmes for teaching staff. In Poland the percentage is higher. We expected that all the teachers would answer with yes.

24 Does student-centred learning encourage deep learning and academic engagement?

A number of Slovenian teachers (65 %) think that student-centred learning encourages deep learning and academic engagement. Also a large percent of Lithuanian teachers think so (79.9 %). Polish answers are not quite clear.

25 Does student-centred learning mean a link that will improve relationships between students and teachers?

Slovenian teachers (76 %) believe that student-centred learning means a link that will improve relationships between students and teachers. Rather similar are also answers given by Polish (83.3 %) and Lithuanian teachers (83.1 %). The answers to this question are not always clear although the question was simple. Perhaps we could get better answers if we could motivate teachers to answer with some more sentences.

This comparison shows that **university teachers from Slovenia, Poland and Lithuania think and work similarly in many points.** They all believe that the main advantages of student-centred learning are increased motivation, partnership between teachers and students and that student-centred learning makes students more focused upon learning. Among the most frequently used methods are in-class discussions, individual or small group based activities and problem-based learning. Also group presentations, classroom workshops, projects and role plays are popular in all three countries. The teachers of all three countries try to to support student diversity and individual learning needs by taking time to speak with students who have troubles, offering students additional consultations/advice, individual examination terms and support studies at campus or by distance. If students find learning activities difficult the teachers explain the topic again, look for new study methods and recommend additional literature. The teachers in all three countries provide for study materials in the form of additional literature, textbooks and additional slides. Teachers from all three countries include a lot of cases from the work places of the students (the highest percentage in Poland, the lowest in Lithuania). Teachers from all three countries show that they value students especially by praising students (high percentage is seen especially in Poland, less in Slovenia and Lithuania), speaking with and listening to students and by different forms of respectful behaviour.

The most frequent problems that teachers face when using the student-centred approach are that study programmes cannot be changed quickly, strict syllabus and lack of knowledge and skills in the area of the student-centred learning. Many cases of good practice of SCL are similar in all three countries: referring to the experiences of students, teaching through projects and problems, interest in the problems of students, linking theory and practice, analysis of students' expectations associated with a particular subject, distance studies, systematic consultations for students, teamwork, volunteering of students etc. As regards assessment the teachers in all three countries try to be flexible and use criteria-referenced evaluation methods. There are no considerable differences among the countries as regards giving feedback: teachers most often make feedback by comments directed towards the task, they explain mistakes and give advice how to improve and discuss strengths and weaknesses. The main method to provide for students' word in the assessment is students' asking for explanation of the marks. There are also some cases of negotiations for grades and self-assessment. Teachers try to reduce students' anxiety before examinations mainly by speaking with students and trying to relax them, giving them questions that help to repeat the topic, and telling students to think logically. In all the universities it takes about a week to inform students about their grades. In Poland it is quite clear that there are procedures for students to appeal decisions regarding their academic attainment or progression while the percentage of positive answers in Slovenia and Lithuania is a bit lower than in Poland. About half of the teachers in Slovenia and in Lithuania say that universities have regular development programmes for teaching staff. In Poland the percentage is higher. Slovenian, Polish and Lithuanian teachers believe that student-centred learning means a link that will improve relationships between students and teachers.

We noticed also differences among the participating countries. Slovenian teachers find as advantage of SCL increased confidence of students while Polish teachers think that advantage is in students' better focusing upon learning and according to Lithuanians respecting different individuals. Teachers in the participating countries do not use just the same but also different methods of SCL: Slovenians like solving practical problems and small group based activities, Polish teachers frequently use group presentations, projects,

role plays and classroom workshops. Lithuanians also use solving practical problems, small group based activities, group presentations, case methods and projects. Slovenian teachers try to involve students who do not seem to be interested in the student-centred approach by practical examples and by convincing students that the topics are important. Polish teachers introduce different topics, students are recommended to present the tasks in the class, work on projects and read additional literature. Lithuanian teachers try to increase interest by involving students in teamwork, training students individually and including practical examples. Slovenian and Lithuanian teachers try to support student diversity and individual learning needs by acceleration of studies but Polish do not. Polish teachers support student individual learning needs by Internet consultations and by inviting students to science conferences. Some teachers can support students who find learning activities difficult but not all: 100 % Polish and 59 % Lithuanian teachers have no time to repeat study topics (in Slovenia only 10 % do not have time for repetitions). Slovenian and Lithuanian teachers introduce some research articles and popular scientific literature among study materials but Polish teachers do not. On the other hand Polish teachers emphasize Internet sources that are not very reliable. In Slovenia and in Lithuania teachers ask students if they have enough time for studies and try to teach them how to make good time plans and/or teach time management, suggest effective methods for studying, give additional exam terms, additional consultations etc. Polish teachers do not ask students if they have enough time for studies. In Slovenia and Lithuania very few teachers take students to the library while Polish teachers acquaint students also with libraries. Slovenian teachers show that they respect students by devoting them private time while Polish teachers propose students common project publication, participation in conferences etc. Polish teachers face more problems when using the student-centred approach because they have huge groups of students and there is often no interest in their universities. Polish teachers mentioned more good practices than Slovenian and Lithuanian ones. Polish students have less word in the assessment than Slovenian and Lithuanian. Polish teachers try to reduce students' anxiety before examinations by group exams, projects and exams by Internet. Lithuanian teachers suggest stress management skills and cumulative assessment. Teachers in Poland use student-generated questions while in Slovenia and in Lithuania just a couple of teachers tried to introduce student-

generated examination questions (and they say that it functioned well). Slovenian and Lithuanian students can express their opinion on the teaching methods that are included in the curriculum. Polish students are not involved in consultations about the teaching methods and ways of evaluating learning outcomes. Some Slovenian and Lithuanian students are consulted when learning outcomes in the curriculum are designed but there is no such thing in Poland. Some Slovenian students are consulted on assessment methods included in the curriculum but not so many in Poland and in Lithuania.

3 FURTHER DEVELOPMENT OF STUDENT-CENTRED LEARNING

Student-centred learning has been developing not just in the U.S.A., U.K., Australia and other countries that were among the first to introduce this approach but has become popular also in countries where SCL is not very known, e.g. in Eastern Europe. The role of the teachers is of increasing importance and they are required not only to have appropriate education but also psycho-sociological characteristics, knowledge of information technology, they must develop their personal growth etc. This requires development programmes for teachers and raises the question of the teachers' overload. Even if certain aspects of the student-centred learning – especially the teaching methods and/or types are very popular, it is still necessary to improve ways of assessment, develop information literacy in cooperation with librarians, look for new methods of learning and further personalise students' learning. There should be more research that would investigate students' opinions about SCL and more research of the aspects of SCL that have been criticised by some relevant authors.

3.1 SWOT ANALYSIS

- **Strengths**

More and more schools and especially universities are aware of the benefits of student-centred learning for students, teachers, educational institutions and others. Even Asian countries who claimed that SCL approach was foreign to their culture started to accept SCL.

All the universities in EU that introduced the Bologna system should include also the student-centred approach because the Bologna system requires introduction of numerous characteristics of SCL.

It seems that teachers no more think that they are primarily experts for a scientific area while teaching is their second (less important) activitiy. Many teachers use at least some types and/or methods of the student-centred approach.

A number of relevant authors think that student-centred learning contributes to deep learning (although there are some investigations that do not support this opinion).

Many researchers think that the student-centred approach contributes to better relationships between teachers and students.

- **Weaknesses**

Student-centred learning requires from teachers not just knowledge of their scientific area and pedagogy but also new knowledge such as information technology, team work skills, foreign languages etc.

Teachers must acquire not just a lot new knowledge but also develop their personal characteristics. This requires a lot of work and causes an overload without appropriate rewards.

Assessment is still a rather weak point of SCL and although a number of theoretical findings recommend what to do, there is still no ideal practical solution.

The cooperation among teachers and librarians is very weak. Students do not seem to spend much time in libraries and/or receive information literacy skills. Rare libraries offer their students complete texts from the most important books, peer-reviewed journals and other library materials.

- **Opportunities**

Although students do not know much about SCL (there are just a few peer-reviewed articles on students' voice) they find this approach interesting. Students can be strong motivators for further development of SCL.

Managements of universities and of learning organisations should be interested in development of organisational culture and good relationships within their institutions so they should also be interested in further development of SCL.

Information technology is very important for education but to influence SCL it should provide a personalised approach to students. This means not only developing new appropriate technological solutions but also connecting teachers and technology in a way that will best serve students.

There are plenty of opportunities in development of information literacy and in better cooperation between librarians and teachers.

Study materials for students have been just slightly improved (beside traditional textbooks students nowadays receive also slides) but there are still many possibilities to add new materials.

- **Threats**

Among the most serious threats of the contemporary SCL is overload of teachers in the new system. An SCL teacher should know the scientific area, be acquainted with pedagogy and didactics, know how to prepare study materials, make connections with libraries and employers, and be an ideal facilitator (this role requires additional knowledge). Teachers do not receive all this during their studies and it is also difficult for them to acquire this knowledge in the first year of their work.

There are not enough development programmes for university teachers.

Teachers' salaries have not improved in the majority of countries that were faced with the economic crisis while teachers should work more and get more training.

Analysis of the environment

Environment analysis	**Description**
Political environment	• Universities' policies are said to be autonomous but in reality they are subject to the ministries of education and to governments. • The procedures of changing laws and rules on university education are very long.
Economic environment	• Global crisis dictates the finances that are used for universities. If the crisis continues, teachers' salaries will remain on the same level.

Social – cultural environment	• The number of people who believe in SCL is growing. • Particularly important is development of better relationships among teachers and students.
Tehnological environment	• Information tehnology in the modern world enables different ways of teaching and offers new opportunities also for SCL.

3.2 GUIDELINES FOR FURTHER DEVELOPMENT OF SCL

Student-centred learning should be further supported in all countries

This theoretical and empirical research of student-centred learning (SCL) shows that the **Bologna system influenced the student-centred approach** in higher education institutions that have introduced a number of SCL elements. The SCL teaching/learning methods seem to have been introduced and recognized by the university teachers not only in West European countries that have known SCL for many years but also in Eastern Europe where the term student-centred learning has not been very often used. This research has found that SCL shows many positive effects in different areas (students are more motivated, more focused upon learning, SCL contributes to partnership between teachers and students etc.). The empirical research in 42 tertiary institutions in three EU countries Lithuania, Poland and Slovenia (the last two have at the first sight not shown special achievements in student-centred learning - no special projects, not many peer-reviewed articles or books etc.), proves that teachers include SCL teaching methods in studies, that they appreciate advantages of SCL, that teachers try (at least to a certain degree) to support students' interests and diversity, organize contents and activities around the subjects that are meaningful to the students, that they try to help students to improve their viewpoints and their abilities for cooperation. Several investigations show that SCL could be introduced also in Asian countries that found this strategy too Western and where many teachers opposed it.

Development programmes for teachers are necessary

With the change in the education paradigm where the focus is put on the students' independent learning, a special emphasis should be put not just on the teacher's pedagogical and scientific activities but also on their self-development.

The teacher in student-centred learning has become a facilitator and/or mentor of studies but he/she still has the main role in forwarding the education. This research investigated the teacher's role and found that this **new teacher's role requires plenty of new**

knowledge which can be acquired by teachers‘ acquaintance with SCL (not just with its teaching methods), encouragement of teachers to use this approach, development programmes for personal growth, exchange of good ideas, discussion of additional workload and financial rewards.

The **teachers in this new teaching and learning paradigm should develop different main abilities**: holistic thinking and practice to integrate different subjects, cultures and the points of view at the same time taking into account local and global perspectives; strategic thinking (ability to foresee different future alternatives as well as their implementation possibilities based on the critical analysis and understanding of the past and current situations); implementation of changes and innovations (teacher’s role, teaching and learning methods, organization of studies and changes in the study system). Teachers do not need only didactic knowledge but should develop also their abilities to work in team, to communicate with international partners, they must be able to prepare the study materials, provide distant learning possibilities, participate in scientific activities etc. The teacher’s professional performance is also conditioned by psycho sociological aspects which are important both for the teacher’s scientific activities as well as study quality and the relation between higher education institutions and society.

When moving towards SCL, in many European countries there is a need to revise the structure of the **teacher’s workload**.

It is necessary to further improve assessment of students

The assessment still seems to be one of the weak points of the student-centred learning that could be improved. The sources recommend peer- and self-assessment, projects, simulations of tasks and real life situations, self-assessment grades, negotiating self-assessment grades, more flexible, integrative, contextualized, criteria referenced assessment but a number of teachers still report that the assessment procedures are summative. From the empirical study it is obvious that **teachers have changed assessment only partly** and that they would need good solutions to make the feedback to

students more constructive and enough specific, introduce an explanation, include non-evaluative language and help learners to plan further studies.

SCL needs appropritate information technology

Our research mentions that information technology plays an important role in educational theory or strategy. Information technology is affecting every aspect of teaching, learning and students' lives therefore it is also one of important questions of the student-centred approach. Whilst the benefits of using technology may be plentiful, the peer-reviewed literature and research in the field of technology and SCL is somewhat less so. Development of information and communication technologies introduced the possibility of distance studies. **Teachers who use the SCL approach should be well acquainted with IT so that they could prepare study materials which are sent online.** However, not all the teachers are acquainted with the most recent developments of IT; many teachers do not know how to prepare the study materials and the technology is not yet so developed that it would enable a smooth online conversation. There are some universities that introduced in their distant studies a sophisticated IT system that gives the students a number of the necessary answers but no such system is perfect (even if some universities have practiced distance education for decades). Also web-conferencing is still performed in a rather poor way because the technology in schools does not enable its functioning withought interruptions and because people are not used to it. At present the information technology in SCL does not offer a personalised, student-friendly approach. Our research did not deal with this question in detail but we think that it deserves special attention and requires a lot of work.

The places of learning should be extended

The place of learning should be extended – **learning should take place on campus, in classrooms, libraries, museums, on workplaces or at a distance**. Different methods of distance learning enable learning either on campus or at home and they more or less also enable different time of learning. In Slovenia the distance learning is supposed as acceptable only if students study at home (preferably at the time specified in advance)

and sit for examinations in the school because school authorities are afraid that students might hire somebody to help them and/or students could copy the answers from the textbooks. In U.K. (The Open University) distant studying is accredited but the study and examinations are organized so that students cannot copy the answers from the textbooks. This should be a perspective also for other countries.

There is not enough learning in libraries and museums therefore we should encourage the teachers and students to use also these institutions.

Better study materials and development of information literacy

Our empirial research shows that teachers prepare textbooks, slides and they recommend students to read additional literature. Lists of additional literature were very popular in the teacher-oriented learning but it is a question if students really read the literature on the lists. Besides libraries do not always have books and scientific journals. If teachers do not take students to the library and if nobody shows them how to read and study scientific literature, **students cannot be acquainted with information literacy**. However, information literacy is one of the most important factors for the development of the student-centred learning. Problem-based curricula offer many opportunities to include information literacy as a natural part of the learning process but students also need support and feedback to develop information literacy. University teachers could get help from librarians who are experts on information literacy. They can support the students' views on the information which students need to start thinking about the problem based learning. Librarians are important not just as providers of information literacy but should be included in problem-based learning as people who will teach students how to become life long learners. It was beyond the scope of this research to further investigate also literacy skills of the students.

This research also suggests that **teachers should introduce more research articles and popular scientific literature as well as searching for statistical data**. These would prepare students for written papers that they have to produce within their studies and for

the final paper (diploma or report). If students do not know how to study and read scientific literature, research articles and look for statistical data this means that they are not directly involved in the discovery of knowledge.

Is inclusion of students in curriculum design, implementation and evaluation reasonable?

A number of sources recommend that students should be included at all levels of curriculum design, implementation and evaluation. Our empirical research shows that students are formally invited to cooperate during the process of developing a learner-centred curriculum. The majority of answers were that students have the right to cooperate and that they do it by their representatives in yearly evaluations. However, **curriculum design requires a lot of knowledge which students (and very often even teachers) simply do not possess.**

SCL should be developed as a means to achieve better relationships in higher education

As underlined by a number of authors and shown by our empirical research, student-centred learning means **a link between transforming students and teachers**. Student-centred teaching is not just a different style of teaching but a challenge to encourage personal growth os students and teachers.

Student-centred learning is very important for the organizational culture and/or for better relationships among students, teachers and managements of higher education institutions. This change is focused on the development of the values, believes and attitudes and is the slowest one so there has not been very much research so far. We think that further research should focus also upon this question and try to find out how SCL influences better relationships, communication and atmosphere in universities. Being able to maintain good personal relationships, communication, team-work, developing one's values, beliefs and attitudes in a positive way does not mean just development of one's personal characteristics but also developing one's abilities to find employment. Personal

characteristics such as flexibility, self-confidence and social skills are beside the working experiences and education the most important factor that makes a person employable.

If we want that students achieve superior academic results and personal growth in terms of higher self-confidence, openness to experience, that they learn in an atmosphere or climate that can be characterized by acceptance, and empathic understanding we should recommend that further development programmes for teachers are created. They should develop teachers/facilitators to be real in the relationship with student, be the person he/she is and not use any masks of facades in communicating with the students. The programmes should teach the teachers to show acceptance, prizing, and respect towards students. Deep understanding, often called empathic understanding, means that the facilitator actively listens to the students with the ultimate goal to profoundly understand their questions, motivations, intentions, and the meanings of their communication as well as solutions. It is very important for teachers to remember that every single person has had unique experiences, different upbringing, is interested in various things and because of that their world outlook is not identical. Very often people approach the same things in a different way, plan their future differently. Even when studying the same subject or module, students tend to see different perspectives.

It is necessary to make further research of problems and criticism of the SCL

Student-centred learning is not without problems and there is also some criticism.

According to the findings the lack of a definitive theory supported by well-documented examples of practice has hampered the wholesale adoption of SCL by educational institutions. In order for SCL to make further development it is necessary to **make a clear understanding of what SCL is, what it looks like in practice and what its benefits are**. It is also necessary to understand how teachers can assess their (and their students') progress with the aid of clear and structured success criteria.

SCL needs a more consistent and solid identity and teachers need a generally agreed model of SCL that is better defined, based on a combination of theory, practice and evidence, utilises technologies to their best advantage and is underpinned by effective assessment strategies. It is only then that we can hope to truly empower teachers in using student-centred learning.

How to individualise the learning to the personal needs of the students

One of the questions that arose during this research was also whether and how to individualise the learning to the personal needs of the student. Aslan in Reigeluth (2013) state that modern educational systems should address the needs of the contemporary students, facilitate the study process and prepare students for social life. Each educational system **should look at each individual student as a student with special needs** and should not require that all students learn in the same way. Our research shows that teachers can list a number of methods with which they try to address individual needs of the students. This makes us think that teachers are ready for individualisation. The theoretical recommendations that it is necessary to develop the competence and confidence of each learner through teaching and learning, that every student should enjoy the study choice, proceed through the course at their own pace, that there is tutorial support and individual assessment of each of the courses, that lectures should motivate students rather than deliver content based courses as well as the empirical results suggest that we should develop personalized learning (whether it is a learning strategy or a teaching method).

There should be more students' voice concerning SCL

Although the literature does not contain much of students' opinion concering SCL, students seem to have some ideas how this should look like. What we have missed in the up-to-now studies is **more research on student-centred learning made from the standpoint of the students**. The student-centred approach puts a lot of emphasis on students so there is student's voice that should really count when discussing this area. Students themselves will also be the most adequate persons to explain whether and how

SCL contributes to their knowledge, to their academic achievements and to their personal development.

4 CONCLUSIONS

This research presents opinions of relevant authors on the contemporary student-centred learning and enables an insight into the practice of lecturers from three countries, Lithuania, Poland and Slovenia. It shows that SCL has got its place in European universities however several of its aspects should be developed further.

The theoretical part of the research cites a number of relevant authors who present **important features of the contemporary student-centred approach**: taking into account individual learners' experiences, perspectives, backgrounds, interests, capacities and needs. SCL requires that teachers should provide different opportunities for students to learn, often change teaching methods, help students who have troubles, discuss with students which study activities lead to good results, expose students to finding their own solutions, provide different learning environments in which learners feel safe and accepted, develop global, interdisciplinary, and complementary activities, emphasize activities that encourage cooperation, provide different study materials and give students enough time to construct the information cognitively and connect the new knowledge and real life. Many of these characteristics are described at large because they helped to produce two important outputs of the research: teacher's handbook on student-centred learning and several articles.

The research describes **the most frequent types of student-centred learning** such as problem-based learning, project-led education, learning contracts, flexible learning, inquiry learning, just-in-time checking and personalized learning.

A number of relevant authors think that **the assessment** in student-centred learning is not yet enough developed. Assessment within the student-centred approach should be more flexible, integrative, contextualized, criteria referenced, informing the students about the results, giving advice on how to improve knowledge, and be fair. Examination questions should refer to real situation and not lead to categorizing students with regard to their marks. The feedback should contain an explanation, the language should be non-

evaluative, given in time and frequently, and it should help learners to plan further studies. The assessment has been dealt with for many years and teachers seem to know what they should do. However, this is difficult because it is very time-consuming.

The curriculum should be designed so that it would help individual requirements of students: by including experiences, problem-based approach, by the use of virtual problems related to the subject, by new technologies such as simulators that provide a more realistic learning experience. Many authors claim that students in student-centred curricula should be active participants in designing the curriculum but there are doubts that this is possible because designing curricula requires plenty of knowledge.

Even today a number of teachers think that there are **limits beyond which SCL cannot go**. The most frequently listed are limits as regards the scientific fields, geographical areas and big sizes of classes.This research cites several relevant authors who proved that student-centred learning is developed in different areas of medicine, business, chemistry and in many other scientific areas. SCL has been developing also in Asian countries whose culture is different from Western ones and it seems that it can be used also in very big classes.

This research found that teachers are well acquainted with many different aspects of student-centred learning although the there is no generally accepted definition of SCL. However, teachers need more development programmes which will not acquaint them just with pedagogic and didactic issues but also accelerate their personal growth and other topics (like use of information technology). The research did not investigate student's voice (because this was beyond the scope of the project) but it would be useful and could show if students have the same opinion about SCL as teachers.

A number of authors claim that student-centred approach stimulates students to adopt a **deep approach to learning** but there are also other scholars whose investigations did not find any advance as regards deep approach to learning. Several authors write that student-centred learning is ineffective and unpopular with some students but it has not been

discovered yet how to help students whose learning remains ineffective. The most frequent problems of teachers using the student-centred approach seem to be students who expect model answers, passive students, lack of motivation for learning, reluctance to engage in discussion and activities. These questions are not dealt with in this research but are important and deserve further attention.

Many authors and also the empirical research show that student-centred learning means a **link that can bring about a different culture in universities**. This approach requires that the teachers really understand and pay attention to the students, that they develop optimistic view of the potential of any human being, empathy and thus contribute to more human relationships between student and teacher. This will also increase fundamental personal growth of the participants in education.

The third part of the theoretical research focused upon typical characteristics of the teachers in SC approach and led to formulation of criteria for assessing teacher's roles in the context of the student-centred studies. The teacher's role in the student-centred learning at first sight appears less important than in the past – an SCL teacher is a **facilitator of knowledge** and no more the only source of power. Student-centred learning means inverting the traditional teacher-centred understanding of the learning process and putting students at the centre of the learning process. In the *teacher-centred* classroom, teachers are the primary source for knowledge, in *student-centred* classrooms, active learning is strongly encouraged. The instructor role is taken over by a facilitator who accompanies rather than leads or coaches students in their personal learning. Emphasis in SCL is on interpersonal values – how can I be supportive here and now – and on providing a climate of trust and openness that can be used for whole-person learning, involving cognition and feeling, mind and heart of every individual. It is precisely this acceptant climate and balance of cognition and emotion that is made responsible for their synergetic effects leading to deeper, life-long learning experiences.

The teacher who accepts student-centred learning has to work much harder than before **to develop the knowledge and personal characteristics necessary for SCL approach.**

The teacher needs a considerable level of the didactic knowledge that he/she is able to organize the teaching and learning process, prepare the teaching and learning materials, provide distant learning possibilities etc. The teacher still participates in scientific activities. He/she must also be able to work in team, cooperate with international partners, consider organisational culture etc. All this knowledge and qualities cannot be developed during their studies and need further support by development programmes.

This research intended to empower teachers for student-centred learning therefore **it does not try to solve some important problems, namely that SCL needs a more consistent and solid identity** and teachers need a generally agreed model of SCL that is better defined, based on a combination of theory, practice and evidence, utilises technologies to their best advantage and is underpinned by effective assessment strategies.

The second part of our research focused upon performance of the student-centred approach in three European countries, Slovenia, Lithuania and Poland. The empirical research gives a possibility to take a look at the trends of SCL in the three countries involved in the project and it helped to produce the next project outputs, particularly teachers' handbook with good practices.

Lithuanian literature has quite some authors who wrote on the student-centred learning but in Poland and Slovenia the term SCL is not often used. However, also Poland and Slovenia use the Bologna system and their tertiary education had to include its main characteristics. Even if the East European countries have so far not led many SCL projects, some of its strategies and teaching methods are known and used also in these countries.

The teachers seem to be quite well aware that student-centred learning has advantages like motivation of students, that it contributes to their being more focused upon learning, and that it develops partnership between teachers and students. The teachers include in their teaching SCL methods like in-class discussions, problem-based learning, group based activities, solving practical problems, individual or small group

based activities, etc. Teachers try to involve students who are not interested in SCL by practical tasks, by discussions and in other ways. The majority of the teachers can support student diversity and individual learning needs so that they offer them additional consultations, speak with those who have troubles, offer them individual examination terms, and enable studies at a distance. Some teachers also contact students via Internet. Teachers support students who find their learning activities difficult by by explaining the topic again and by looking for new study methods. Teachers support students by textbooks, additional slides, lists of additional literature but they do not often use research articles, popular scientific literature and statistical data. Only teachers in one of the countries say that they have no time to repeat things. If students do not have enough time, teachers try to help them by discussions and by extended terms. It is rather surprising that teachers do not often take the students to libraries which should be the other place for learning. However, they very often ask them to use experiences from their work place. Teachers also try to show that they value students either by polite behaviour, or by listening to students. Among the most frequent problems of SCL are rather fixed study programmes that cannot be changed quicky; sometimes also strict syllabus that does not allow SC approach. The teachers listed a number of good practices of the student-centred learning which they use. The assessment is in many cases flexible and criteria-referenced but in some countries still summative and content-heavy. The teachers frequently provide feedback to students, explain mistakes and give advice how to improve. If students are not pleased with the assessment, they can come and ask for explanation but students are not actively involved in assessment. Teachers try to relax students before examinations and often give them questions to repeat the topic. Students receive assessment in average in about a week. Less than half of the teachers are acquainted with the practice that students can appeal decisions regarding their academic achievements which means that students' voice in this regard does not mean much. As regards students' voice in the curriculum content, the teaching methods, learning outcomes, assessment etc., less than half of the teachers say that students have influence upon curriculum – only indirectly – by their representatives. Only about half of the university teachers who responded the questionnaire mention that they have regular professional **development programmes** for the staff. A considerable number of teachers feel that SCL encourages deep learning and

academic engagement and even more find this approach good for development of the relationships and organizational culture in the university.

The universities from the three participating countries do not seem to oppose the student-centred learning but on the other side they also do not give it any special support. Less than half of the teachers mentioned that they have development programmes and it is a question if these programmes contain any special focus upon SCL. This requires special attention and further research. How should the teachers gain more knowledge about contemporary teaching if they do not have any training in this regard?

Another important weak point is connections among teachers and librarians. It is most surprising that teachers do not take students to the library (the situation is better in Poland). All the universities have libraries and teachers and librarians should be encouraged to cooperate and thus offer students more opportunities for different learning environment, for acquainting students with information literacy and for inclusion of students in the research work. Better cooperation among librarians and students could also encourage teachers to support their students with research articles, statistics and so on which are a much better source than lists of additional literature that is usually not consulted by students.

We can conclude that student-centred learning has forced its way in the tertiary education even if teachers do not receive much support from their universities. There are of course a number of open questions which should still be answered – from the uniform definition to new development programmes. However, teachers know and use many of SCL teaching methods and other useful items of SCL. This means that SCL is a good approach that should be investigated and introduced also on other levels of education all over the world.

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ENCLOSURE: Questionnaire for teachers

I Questions related to the teaching/learning process

1 Which are according to your opinion the main advantages of student-centred learning (1 - very important, 2 - important, 3 - moderately miportant, 4 - of little importance, 5 – unimportant):

	Proposition	1	2	3	4	5
1.	Motivation of students					
2.	Possibility that students learn at their own pace					
3.	Being more focused upon learning					
4.	Respecting different individuals					
5.	Increase of confidence					
6.	Partnership between teachers and students					
7.	More responsibility and committment					
8.	Other (please describe)					

2 Which of the below methods do you include in your teaching (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never):

	Proposition	1	2	3	4	5
1.	Problem-based learning					
2.	Individual or small group based activities					
3.	In-class discussions					
4.	Classroom workshops					
5.	Group presentations					
6.	Projects					

7.	Solving practical problems					
8.	Cooperating in research activities					
9.	Quizzes					
10.	Use of the case method					
11.	Use of role plays					
12.	Collaborative paper assignments					
13.	Web-conferencing environment in distance education					
14.	Other (please describe):					

3 How do you try to involve students who do not seem to be interested in the student-centred learning? Please describe with a couple of words.

4 *Can you support student diversity and individual learning needs by (1 – yes, 2 – no, 3 – I don't know):*

	Proposition	1	2	3
1.	Offering students additional consultations/advice			
2.	Offering students individual examination terms (beside the terms which are defined by the University calendar)			
3.	Taking some time to speak with a student who has troubles personally/trying to tell him/her how to achieve better results			

4.	Enabling students to accelerate their studies (= to finish their studies in 2 years instead of 3)			
5.	Enabling students to prolong their studies (= to finish their studies in e years instead of 1 year)			
6.	Helping foreign students who do not speak your national language			
7.	Using special support measures that help students from disadvantaged backgrounds?			
8.	Studying either on campus or at a distance			
9.	0ther (please put down):			

5 *How do you support students when they find teaching/learning activities difficult (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)*

	Proposition	1	2	3	4	5
1.	I explain the topic again					
2.	I tell them to read additional literature					
3.	I have no time to repeat things					
4.	I am looking for new study methods					
5.	Other:					

6 Which typical study materials do you introduce to support students? (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never)

	Proposition	1	2	3	4	5
1.	Textbook					
2.	Additional slides					
3.	List of additional literature					
4.	Research articles					
5.	Popular scientific literature					
6.	Statistics					
7.	Other (please describe with a couple of words):					

7 Do you ever ask students if they have enough time for studies? If you find that is not enough, what do you do?

8 Do you ever take students to:

- Libraries
- Museums
- Ask them to describe a case from their work place?
- Other (please describe with a couple of words):

9 How do you show that you value students? (Please describe with a couple of words):

10 Which are the most frequent problems that you face when using the student-centred approach? (1 – yes, 2 – no, 3 – I don't know):

	Proposition	1	2	3
1.	Strict syllabus that does not allow student-centred approach			
2.	No interest in the university			
3.	Lack of knowledge and skills about student-centered learning			
4.	Study programs are not being able to change quickly			
5.	Other (please put down)			

11 Please describe two cases of good practice of the student-centred learning (either good practice that you use or good practice that you have heard of):

II Questions related to the feedback

12 Select the evaluation methods which you use (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Method	Importance
Content-heavy	
Summative	
Norm-referenced	
Flexible	
Criteria referenced	
Formative	
Other (please put down)	

13 Evaluate your assessment – feedback to students: (1 - very frequently, 2 – frequently, 3 – occasionally, 4 – rarely, 5 – never, 6 – I don' know)

Proposition	Importance
Do you make feedback, comment directed towards the task	
Do you discuss strengths and weaknesses	
Explain mistakes and give advice how toimprove	
Help to focus on skills relating to a deep approach to learning	
Other (please explain)	

14 How do you provide for students' word in the assessment?

- Students suggest self-assessment grades

- Students negotiate self-assessment grades
- Students can come and ask for explanation of the marks
- Other (please explain):

15 How do you try to reduce students' anxiety before examinations?

- I speak with students and try to relax them
- I give them questions that help to repeat the topic
- I tell them to calm down
- I tell students to think logically
- Other (please describe):

16 How long does it take before students receive feedback?

- One week
- Two weeks
- One month
- Other:

17 Are there procedures for students of your University to appeal decisions regarding their academic attainment or progression?

Yes-no-I don't know

18 Has any of the teachers tried to introduce student-generated examination questions? If yes, how were the results?

III Questions related to curriculum

19 Are students of your University consulted on curriculum content? (Briefly describe how)

20 Are students of your University consulted on the teaching methods that are included in the curriculum? (Briefly describe how).

21 Are students of your University consulted when learning outcomes in the curriculum are designed? (Briefly describe how)

22 Are students of your University consulted on assessment methods included in the curriculum? (Briefly describe how)

IV Questions related to professional development programmes

23 Does your institution have a regular professional development programme for teaching staff? Yes-no-I don't know

24 Do you think that student-centred learning encourages deep learning and academic engagement? Please justify.

25 Do you believe that student-centred learning means a link that will improve relationships between students and teachers? Please justify.