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INNOVATIVE LEARNING ENVIRONMENT AS A CRUCIAL FACTOR FOR GRADUATE EMPLOYMENT

The emergence of knowledge-intensive society and transformation of industry-based society to knowledge-intensive one demands the market where specialists and professionals are equipped with high quality education, necessary skills and competencies in the competitive world. Higher Education plays an important role in the process of economic development and social progress of any nation, thus higher education is considered to be the backbone of any society. To ensure the high quality education, the approach of learning should be innovative, which ensure the acquisition of necessary knowledge, skills and competences required by the current domestic and foreign market.

The rapid development of information and communication technologies and the associated large-scale changes in all spheres of human activity inevitably affected the cognitive activity and abilities of the new generation of students. The so-called “Z” generation has pronounced features of the motivational and innovational environment, as well as paradigm of student-centered learning, in which the major role plays student’s own proactive position in shaping and mastering the individual educational trajectories.

Thus, in this paper, we aimed to investigate how innovative learning environment influenced quality education by examining graduate employment and explored the relationship between student-oriented learning and quality assurance in higher education.

Key words: *higher education, innovative environment, graduate employment, quality education, European standards and guidelines*

Білімге негізделген қоғамның пайда болуы және салалық қоғамның білімге негізделген қоғамға айналуы сапалы біліммен, қажетті дағдылармен қаруланған және бәсекеге қабілетті мамандарға толы нарықты қажет етеді. Жоғары білім беру кез келген ұлттың экономикалық дамуы мен әлеуметтік прогресс үдерісінде маңызды рөл атқарады, сондықтан жоғары білім кез келген қоғамның іргетасы болып саналады. Білім берудің жоғары сапасын қамтамасыз ету үшін, қазіргі ішкі және сыртқы нарыққа қажетті білімді, дағдыларды және құзыреттерді алуға мүмкіндік беретін білім берудің инновациялық әдістері болуы керек.

Ақпараттық-коммуникациялық технологиялардың қарқынды дамуы және адам қызметінің барлық салаларында ілесне кең ауқымды өзгерістер сөзсіз жаңа буынның когнитивтік әрекеттеріне және қабілеттеріне сөзсіз әсер етті. «Z» ұрпағы деп аталатын жаңа буын мотивациялық және инновациялық ортаның пайда болуына әсерін тигізді, сондай-ақ жеке білім беру траекториясын қалыптастырып және дамытудағы белсенді рөл атқаратын білім алушыларға негізделген оқыту парадигмасын да қалыптастыруға септігін тигізді.

Осылайша, осы мақалада біз инновациялық білім беру ортасының түлектердің жұмыспен қамтылуын зерделей отыра, сапалы білімге қалай әсер еткенін және жоғары білім берудегі сапа кепілдігі мен студенттік бағытталған оқу әдісі арасындағы байланысты зерттедік.

Түйін сөздер: *жоғары білім, инновациялық орта, түлектерді жұмысқа орналастыру, сапалы білім, еуропалық стандарттар мен нұсқаулар*

Возникновение наукоемкого общества и превращение отраслевого общества в наукоемкое требует рынка, на котором специалисты и профессионалы оснащены высококачественным образованием, необходимыми навыками и компетенциями в конкурентном мире. Высшее образование играет важную роль в процессе экономического развития и социального прогресса любой нации,

поэтому высшее образование считается основой любого общества. Для обеспечения высокого качества образования подход преподавания / обучения должен быть инновационным, чтобы обеспечить приобретение необходимых знаний, навыков и компетенций, требуемых текущим отечественным и зарубежным рынком.

Бурное развитие информационных и коммуникационных технологий и связанные с этим масштабные изменения во всех сферах человеческой деятельности неизбежно повлияли на познавательную активность и способности нового поколения студентов. Так называемое поколение «Z» имеет ярко выраженные особенности мотивационной и инновационной среды, а также парадигму обучения, ориентированного на студента, в которой главную роль играет активная позиция самого студента в формировании и освоении отдельных образовательных траекторий.

Таким образом, изучая трудоустройство выпускников и исследуя связь между обучением, ориентированным на студентов, и обеспечением качества в высшем образовании, анализируется, как инновационная среда обучения влияла на качество образования.

Ключевые слова: высшее образование, инновационная среда, трудоустройство выпускников, качественное образование, европейские стандарты и рекомендации.

Introduction. President of ENQA Peter Williams has noted a significant rise of students' involvement in the process of quality assurance (Workshop reports, 2006). Apart from students' active participation in the external and internal quality assurance processes, they are becoming active participants of learning environment. In a period of rapid technology and innovation development, demand for high-quality heads is quite becoming tremendous. Consequently, there is a big challenge and goal for higher education institutions to bring up a new generation of talents to comply with the demand of the society and labour market. As a result, it is worth noting the significance of discussion of new innovative learning environment.

There is a question why such attention is paid to student-oriented learning in higher education:

– First of all, there is a tendency of increase in the number of students, as a result, a huge social diversity of students in universities;

– Secondly, information and communication technologies: changes, affecting all social life, including teaching and learning;

– Thirdly, international student mobility, disclosing diversity methods of teaching and learning used throughout the world;

– The fourth is priority of European Unions of students promoting social aspects of the Bologna process (Froment, 2017).

In 2010 Kazakhstan has become a member of the Bologna process, and since that event Kazakhstani Higher education system has undergone significant transformation. One of the key directions of changes was development of approach in the design and implementation of educational programmes. The goal of modern higher education is the development of future specialist, the formation of his ability to be competent on labour market and to become active and responsible citizens of their countries (Manarbek, Kondybaeva, Celetti, 2018:47).

By competences we understand learning outcomes, what a graduate must know, understand and be able to demonstrate after graduation. Today, there is a change in the paradigm of higher education, and transition from teacher-focused approach to student-centred has become one of key factors of successful employment of graduates.

The discussion of students' participation as partners in education quality management has taken place in several international events. One of them is the Prague communiqué of 2001 (Communiqué of the meeting of European Ministers 2001), where the role of students in the process of development of educational programmes content has been discussed. In addition, the role of students as partners is also emphasized in the Berlin communiqué 2003 (Communiqué of the Conference of Ministers 2003). London 2007 communiqué revision of traditional "schemes" of education and programme development was driven by the need to improve the effectiveness of training and to expand teaching styles and methods (London Communiqué 2007).

Today, a student-oriented approach to learning is a central position in the learning process of majority universities in Kazakhstan. The Ministry of Education and Science, the administration of universities fully encourage the improvement in the quality of learning and innovation in the process of teaching. In the Plan of the Nation "100 Concrete Steps", the President of Kazakhstan, Nursultan Nazarbayev sets a clear task - to improve the quality of human capital based on OECD countries standards (Plan of the Nation 2015).

Theoretical foundation and research hypothesis. The concept of student-centered learning is not new. New environment with student involvement takes its root from the writing of the ancient philosopher Socrates, who made an emphasis on the role of the student in the process of learning through a dialogue or question-answer method (Loyens, Rikers, 2008). The active participation and responsibility of students for their learning are the main characteristics of new learning environments (Cannon, Newble, 2000 and Baeten, Dochy, Struyven, 2016:43).

The review of Harvey (Harvey, Drew, Smith, 2006) showed that students seem to prefer student-centered learning environments and activating learning activities rather than lectures. Furthermore, activating learning activities seem to be effective, if students are well-prepared (Severiens, Meeuwisse, Born, 2015: 1).

Several perspectives have emerged regarding the conditions for learners-centered environment. Many argue, that recent rapid advances in technology have accelerated the successful realization of innovative approaches in learning. Enhancement of computer technology in learning process pushes forward student-oriented learning activities (Hannafin, 1992:49). In support to previous opinion, technology-advanced student-oriented environment provides conditions for wider thinking and individual search, contributes to innovative and favorable activities, which cover interactive engagement of students and count individual interests and requirements of learners (Hannafin, Land, 1997:167). However, other scholars advocate that there should be favorable conditions for effective implementation of innovative approach, as taking into consideration elements of student-oriented learning in developing educational programmes and combining more-innovative environment practices (Cheryl, 2004: 141).

A broad range of studies have been dedicated to the role of student-oriented learning, however, there are few studies on defining the relationship between new learning environment and quality assurance via graduate employment as a mediator. The aim of this paper was to investigate how new learning environments affected quality education through graduate employment. The model developed for this purpose is presented in Figure 1.

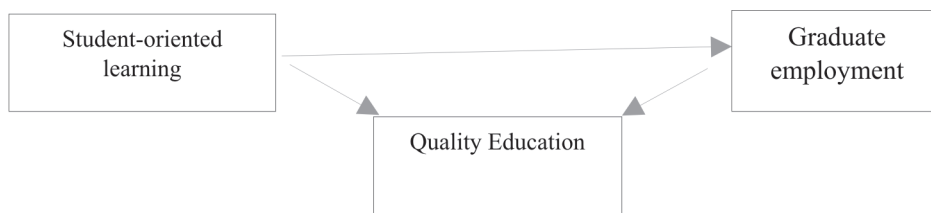


Figure 1 – Research model. (Note – designed by authors)

Some authors believe that considering particular specifications like equity of power between learners and instructors, the process of assessment, the role of programme content and teachers versus learners can lead to more student-oriented learning environment (Wright, 2011:92). Actually, there are plenty of research done on the positive impact of student-centered approach on the quality of education. To illustrate, some scholars advocate that healthy learning environment and less depressive classes are the results of curriculums developed on student-oriented approach (AlFaris, Naeem, Irfan, 2014:192). In a like manner, there is an opinion about learner-focused approach, as a means to improve active learning and learning outcomes (Rezende-Filho, da Fonseca, Nunes-Souza, 2014 :189). Thus, based on theoretical assumptions, proposed by scholars on positive impact of new learning environment to quality assurance.

H1: Student-oriented learning is positively related to Quality Education.

Many researchers highlight that inquiry-based, problem-based and project-focused learning instructions can lead to innovative learning environment with active student involvement, which in its turn guarantees enhancement of practical, academic and non-cognitive skills of learners, as well as development of students’ critical thinking and positive attitude towards learning (Keiler, 2018:34). It is worth to note the role of latest information technologies, which contribute to effective implementation of innovative approach with student’s active participation. For instance, some believe that an accessible e-learning is an important factor for all types of students (including those with disabilities) to be engaged in active learning environment (Kumar, Owston, 2016: 263).

Actually, in the literature there is a complex of models that promote enhanced engagement of learners into the learning process. In support of a contextual framework and practical guidelines, we can name the model REALM - Rich Environments for Active Learning (Grabinger, Dunlap, 1995: 5), another framework based on active learning through social media (Casey, 2013:159), in addition, a motivational Keller’s ARCS model aimed to improve attention, confidence and satisfaction of learners (Keller, 1987:2). In the meantime, there is a developed model “Own it, Learn it, and Share it”, that incorporates motivational, cognitive, social, and affective aspects of learning (Lee, Hannafin, 2016: 707). Today, the main issue is around the successful implementation of student-oriented learning which will lead to successful graduate employment.

It is worth to note that one of indicators of quality education is graduate employment. In this regard, the significant contribution of external stakeholders, notably, employers in the development of innovative teaching approaches is crucial. Mostly, in a jointly cooperation with the university, employers carry our professional or practical classes in industries,

companies, where students emerge into the real world of labour market. Representatives of enterprises of various industries develop recommendations on the priority areas of educational programmes, propose non-traditional ways of acquiring knowledge, skills and competencies considering current labour market needs. Faculties mostly concentrate on development of skills and competencies of students, which require potential stakeholders. This in its turn enables preparation of a competitive, highly-qualified graduate, who will be in demand by current labour market and will serve for the welfare of the nation.

Thus, we proposed the following hypothesis.

H2: Student-oriented learning is positively related to Graduate Employment

The significant competitive outcome of the university education has been highlighted by the result of QS Graduate Employment Ranking 2019 (Report of QS, 2019). According to the results of the ranking, the university has become the first university in Central Asia, which took 251 position out of 500 world universities. The ranking encompasses the following indicators: employer-student cooperation, outcomes of alumni, employer reputation, employment after graduation and partnership with employers. Consequently, this in its turn demonstrates the competitiveness of degree programmes, which prepare competitive professionals for internal and external labour market. As the oldest university in the region, currently, the national university accounts not only the best Kazakh academics as its alumni, but also counts great number of ministers, governors, top managers, members of Parliament, CEOs of National corporations and Olympic Champions.

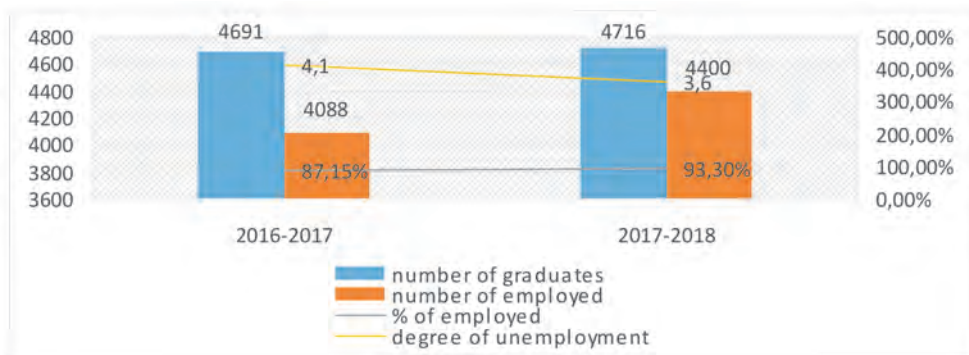


Figure 2 – Number of employed graduates
Source: Rector’s Report, al-Farabi KazNU, 2018

According to the data provided by company HeadHunter Kazakhstan, the majority of graduates in Almaty comes from al-Farabi Kazakh National University (13 %).

The career and professional development centre of the university, as well as graduates of universities use modern and progressive methods of job search, as well as constantly study the market for employers’ offers as opportunities for their career growth. In the educational process of universities, great attention is paid not only to academic, but also applied knowledge and skills, which, of course, will be useful in the subsequent professional activity of young professionals. Universities are becoming student-oriented, students gain business administration skills and confidently use new technologies to achieve their goals.

Following the likelihood, that degree of successful employment would be a key indicator of quality education, we proposed the following hypothesis.

H3: Graduate Employment is positively related to quality assurance.

The hypothesis model of our study is presented in Figure 2.



Figure 2 – The hypothesis model. (Note – designed by authors)

Materials and methods. We attempted to draw a whole picture of student-oriented environment within the university, namely among 15 faculties (except from faculty of pre-university education). The participants were 425 teachers of al-Farabi Kazakh National Universities from 15 faculties. All teachers participated voluntarily. Their participation was anonymous. The instrument of research was a questionnaire, designed to define the level of successful implementation of student-oriented learning approach in KazNU. The survey was sent electronically. This questionnaire consisted of 10 questions, scored on a five-point Likert scale, with response categories ranging from ‘absolutely agree’ (5) to ‘completely disagree’ (1) and the participants of the research were free to express their view on the given question. In addition, our survey asked faculties about their opinion regarding the realized factors of student-centered learning at the university.

The content of survey was formulated based on the main principles of student-oriented learning according to T4SCL project: “Time for a New Paradigm in Education: Student Centered Learning” ran from December 2009 to November 2010 (Stakeholders Forum and 20th European Student Convention, 2009) and on Standards and Guidelines for Quality Assurance in the European Higher Education (ESG 2015).

We assessed implementation of student-oriented learning using a ten-item scale. The reliability coefficient of the scale in this study, according to Cronbach’s Alpha, was 0.8, which indicates good reliability of the scale.

Results and Discussion. In addition, the research tried to identify attitudes of teaching staff towards non-traditional style of learning. The research explored faculty’s attitudes toward student-centered teaching by asking them online the extent to which they agree with various statements. Figure 2 presents the results of the survey as a percentage of faculty selecting *Agree* or *Strongly Agree* with the indicated statement. A strong majority of faculty reported partially realization of non-lecture teaching strategies and demonstrated their *interest in implementing new approach*. The following factors of new approach has been on the focus of the research (*Student Centered Learning. Handbook, 2010*).

– Opportunity for students to participate in development of educational programmes and learning outcomes;

- Opportunity for students to select individual educational trajectories, courses and teachers;
- Need and diversity of the students are taken into account in developing learning outcomes;
- Opportunity for students to search for new information and integrate it with existing knowledge and experience;
- Discussion of teaching and assessment methods with students during, at the end of courses, as well as online;
- The most popular types of teaching;
- ECTS is in compliance with students’ workload;
- Appropriate access for students to research and educational resources within and outside of the university;
- The major goal of learning process is development individual skills and competencies of students;
- There is feedback procedures from students on the quality and satisfaction of education.

In the following figure, we attempted to overview the attitude of teaching staff to innovative approach of teaching – where the main focus of learning is a student. From the perspectives of teachers, there is not enough room for students to be the main player of teaching and learning process. Results are the following:

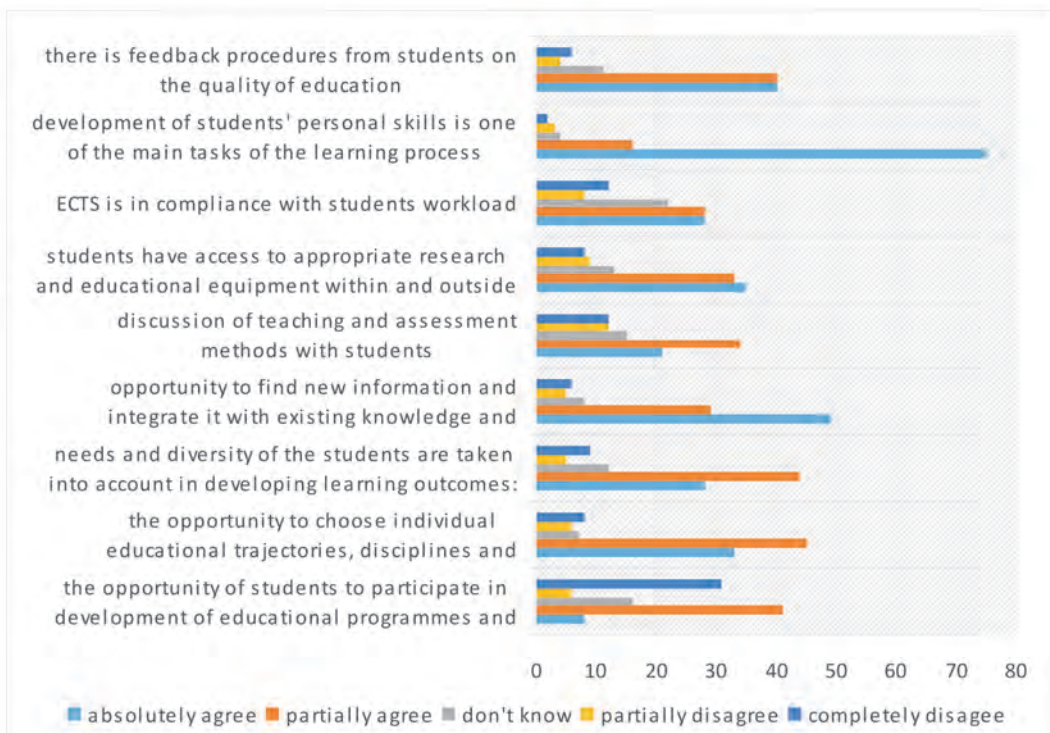


Figure 3 – Implementation of student-oriented learning (Note – designed by authors)

According to the results of research, only half of all respondents are partially agree with the statement that students have the choice to select their individual study trajectories and to be a part of the development process of educational programmes and learning outcomes as well. Most of them base the consent with the fact, that student participation in the development of courses, degree programmes activates their cognitive interest, encourages them to search for themselves. This suggests that students can only define competencies of courses, however skills and knowledge should be determined by coordinators of degree programmes. In addition, if some respondents claim that students have the right to know about expected learning outcomes of courses, others assert that development of educational programs should be carried out by experienced teachers. There is a school of thought that, this only works with motivated students, only with graduates of 3rd year, who have successfully completed professional internship, since students will already be aware of required skills and qualifications from employers. Admittedly, students who choose elective courses need to be acknowledged about current educational issues and trajectories of the chosen course. Students can only define competencies of ownership; skills and knowledge should be determined by the coordinators of educational programmes.

Nevertheless, some argue that a student with incomplete higher education, who has not mastered the basics and fundamental courses of the programme cannot represent the entire responsibility of composing degree programme for the future generation and economy of the country. In this regard, experienced teachers and representatives of leading enterprises and industry in the country are considered to be better, as well as monitoring of leading engineering universities in the field of Natural Sciences.

Regarding, the next factor of student-oriented learning, mainly the right to select individual educational trajectories, courses and teachers, the survey demonstrated that there are various schools of thoughts: some argue that a student should have the right to choose a teacher, regardless of whether he has won scholarship or studies on the fee basis. This opinion stems from the point that, in the first case, the student has confirmed his knowledge to receive a personal state grant. In the second case, people say “who pays, he orders the music”. In the same manner, some respondents claim that teachers should present their courses to students to choose, but at the same time, it should take into account the small number of certain groups. In the meantime, students should be able to select a highly qualified, experienced teacher. Clearly, opponents maintain the right to select courses and trajectories, but not teachers.

We were also interested in determining which types of teaching methods with student active involvement are popular among teachers. Project works, active learning methods, group work were the most well-known types of learning at each faculty. The teachers surveyed were universally aware of lectures, conversations, case studies, situations, business games, TBL CBL, presentations, feedback, and practical classes in the form of questionnaire. Most respondents indicated group working as the most popular type of learning.

A large proportion of respondents from faculties of oriental studies, international relations, information technologies, philology and world languages and higher school of economics and business relatively state that students actively participate in discussion of learning outcomes. Surely most want, students of 3rd or 4th year study, students of master’s and PhD degree to be active participants of the process of learning outcomes development.

We next explored whereas the needs and diversity of student contingent are taken into account in developing learning outcomes. More than half of the respondents take into consideration the diversity of student population in order to meet their requirements. Even though some people claim, that no one consults with students on developing expected learning outcomes, in the same way others believe that expected learning outcomes should be written by course teacher, since he / she knows better what the student should master and what competencies should have at the end of the course. However, there is a school of thought that our students have not matured yet in terms of learning satisfaction. The majority of students are eager to acquire good marks for their achievements that is all. An indicator of quality education is student's employment and demand from labour market for students' great responsibility, ideality, goal-management and fundamental bases of professional skills. If some respondents agree that learning outcomes should be based on the needs of employers, others believe that expected results should be developed by potential teacher of the course, as he or she is aware of what students should acquire and what competencies to have, which is absolutely rejects the concept of student-oriented learning.

According to results of the survey, students are given the opportunity to find new information and integrate it with existing knowledge and experience. As evidence, most of respondents believe that Bologna education system is focused on independent search for information to gain knowledge and no one can prevent it from integrating it with its existing knowledge. In support, for a future competitive student, individual search for information and knowledge is vital, however others claim that individual search should be under the surveillance of lectors to direct them to reliable sources. On the other hand, there is a great need for enhancing language competencies of students, as the language of latest scientific data is English. Obviously, many people believe that this is the essence of active learning.

As for discussion of teaching and assessment methods with students, teachers do not fully agree with this statement, as most of them are not aware of cases of discussing with students methods of teaching and evaluating knowledge during, at the end of courses, as well as online. Even though some people claim the following types of methods for discussion of assessment methods: discussions, business games, studio cases, work in small groups, in pairs at seminars, presentations, case studies, mutual evaluation of ideas, written essays, brainstorming, projects, world science innovations and after examination period training methods as TBL PBL/CBL. Clearly, opponents maintain the point, that methods of teaching should be mastered by teaching staff through courses in advanced training and personal observation of students in the learning process, as there is a fear what would happen if the student advises how to teach a lesson, then why is a teacher needed at all? Despite the necessity of discussing methods with students, the last decision remains with the teacher. Equally important, it is not always effective applying a particular method that was effective with another group to others, so there is a need to offer students several teaching or assessment options.

Top major findings emerged from the survey are the followings:

- The workload of students are in compliance with acquiring credits;
- Students have access to appropriate research and educational equipment within and outside the university:
- Development of students' personal skills is one of the main tasks of the learning process.

Furthermore, regarding the opinion of teachers on feedback procedures from students on the quality of the educational process - questionnaires, scientific seminars projects, debates, round tables, on-line courses, feedback on the mastering of lecture at the end are the most popular ones.

Conclusion. In this study, we tried to investigate how student-oriented learning influenced graduate employment based on quality assurance. Similarly, we found the attitude of teaching staff towards new learning environment and defined the relationship between graduate employment and quality education. The results of the findings suggest that graduate employment was positively affected by new approach of learning and student-oriented learning mediated the relationship between quality assurance and graduate employment. That is, when student engagement into learning process is active, the scope of knowledge and skills widens, which in turns leads to successful employment after graduation. The bigger number of employed graduates demonstrates the higher quality of provided education.

In other words, innovative approach to learning will guarantee highly qualified professionals and competitive graduates, who will serve for the prosperity of nation's economy and development of its nation's welfare.

Limitations. Several limitations of this research should be mentioned. First of all, as research was made within a single higher education institution, the further studies are required to advance our knowledge of new learning environment. Secondly, the current research examined only one dimension of quality assurance mechanism of higher education, that is relationship between student-oriented environment and graduate employment. Other indicators of quality, such as faculty performance may exist.

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