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Innovative teaching methods for international students

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Abstract

Student mobility is one of the forms of internationalization of higher education. The internationalization of higher education involves the universalization of knowledge, the orientation in the global intellectual market. Our work studies the innovative teaching methods right down international student alley. These teaching approaches are discussed based on case study workshop, brainstorming session, small group teaching, and project work. Using these methods lead to improve the learning efficiency and to solve a range of learning tasks, including using a foreign language in interpersonal communication and professional activities; setting goals and formulate the tasks related to the application of professional skills; organization a teamwork; implementation business communications, such as public speaking, negotiations, meetings, business correspondence, electronic communications, and development the ethics of professional manager and cultural sensibility. The result of our investigation was validated on Tomsk Polytechnic University international students by benchmarking study, questionnaires, interviewing of the lecturers and the international students. This University ranks second among the Russian universities and ranks fifth among BRICS countries universities in terms of international students. We also suggest that the only systematic use of innovative methods may produce outstanding results in teaching.

Keywords: Creativity in education, innovative teaching methods, international students, internationalization of education.

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1. Introduction

The internationalization of higher education is one of the factors upgrading competitive advantage of universities in the international market. Student mobility has expanded dramatically in recent years, having gained 4.5 million international students in 2012 year, being one of the forms of internationalization of higher education. The internationalization of higher education leads to universalization of knowledge, to development of international standard on quality, and to overview entry of new requirements both for students and for lecturers. At the present day in knowledge-based economy, one of the overarching goals for universities is not just an international students proceeding, it is a training of highly qualified specialists, having the potential to work and to succeed in international teams, adapting to changing conditions, and being achievement-oriented in the global intellectual market. In order to meet these requirements it is essential to put more focus on the quality of the teaching process, most significantly teaching methods for international students.

2. Objectives, methodology and research design

We propose the hypothesis that the innovative teaching methods for international students, for example role games, case-studies, small group work, team projects, mental map, and the others, are more effective, than traditional methods, such as lectures and seminars. We have made our investigations in National Research Tomsk Polytechnic University (NR TPU). In our investigations, we use approaches such as benchmarking study, questionnaires, interviewing of the lecturers and the international students.

3. Innovative teaching methods for international students

3.1. International student mobility trends

In 2012, more than 4.5 million students were enrolled in tertiary education outside their country of citizenship. Australia, Canada, France, Germany, the United Kingdom and the United States together receive more than 50% of all international students worldwide. Figure 1 shows the number of international students in different countries. The United States hosted most of these students, with 16% of all international students, followed by the United Kingdom (13%), Germany (6%), France (6%), Australia (6%) and Canada (5%) (Education at a Glance, 2014, p.343).

Australia, Austria, Luxembourg, New Zealand, Switzerland and the United Kingdom have the highest proportion of international students as a percentage of their total tertiary enrolments. Students from Asia represent 53% of international students enrolled worldwide. The largest numbers of international students from this continent are from China, India and Korea.

The share of international students who chose the United States as their country of destination for tertiary education dropped from 23% in 2000 to 16% in 2012, and the share of international students who chose Germany fell by almost three percentage points during that period. In contrast, the shares of international students who chose Korea or New Zealand as their country of destination grew by at least one percentage point, while the share of students who chose the United Kingdom or the Russian Federation grew by around two percentage points. Some of these changes reflect differences in countries' approaches to internationalization, ranging from marketing campaigns in the Asia-Pacific region to a more local and university-driven approach in the United States. Some new players have emerged on the international education market in the past few years. Besides the six major destinations, significant numbers of international students were enrolled in the Russian Federation (4%), Japan (3%), Austria (2%), Italy (2%), New Zealand (2%), and Spain (2%) in 2012 (Education at a Glance, 2014, p.345).

International students from neighboring countries are also strongly represented in the Russian Federation (68%) (Education at a Glance, 2014, p.351). The proportion of international students in

Russian Federation is formed, above all, thanks to Russian-speakers students from CIS countries, such as Byelorussia, Kazakhstan, Ukraine, Azerbaijan, and Uzbekistan. Nearly 40% of them are descended from the countries in which the Russian is an official language.

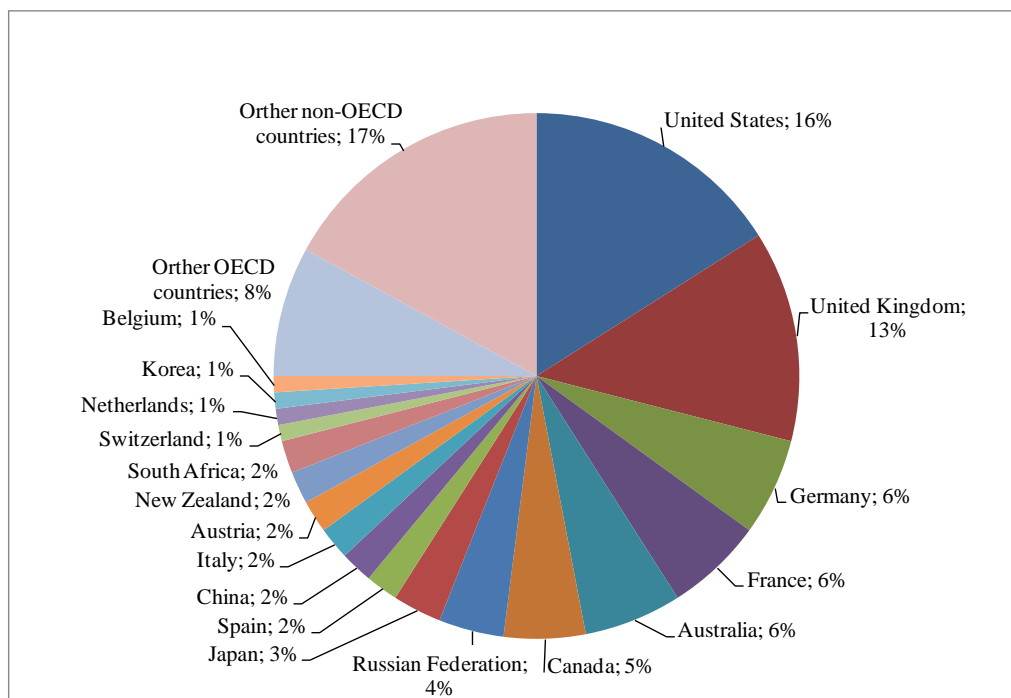


Figure 1. International student numbers in different countries, 2012

The NR TPU ranks second among the Russian universities and ranks fifth among the so-called BRICS countries universities in terms of international students. In 2015 there are 5 371 international students studying at NR TPU, from 42 countries, such as China, Mongolia, Greece, Greece, Nigeria, France, Zimbabwe, Vietnam, Côte d’Ivoire and others (beside 3 400 international students in 2014 year), making up highly 23% of all TPU students. The NR TPU is one of the few Russian universities, in which the education programme is available in the English language both to bachelor degree and Master degree alike (a total of 18 programs) (<http://www.tpu.ru>).

3.2. Language is one of the main attractions for students

Language is one of the main attractions for students coming to study. For example, 55% of international students in Portugal come from countries where Portuguese is an official language, such as Angola, Cape Verde and others.

Language and academic traditions also explain the tendency of English-speaking students to concentrate in other countries of the British Commonwealth or in the United States, even if they are geographically distant. This is also true for other historic geopolitical areas, such as the former Soviet Union, the Francophonie and Latin America. Migration networks also play a role, as illustrated by the concentration of students with Portuguese citizenship in France, students from Turkey in Germany or those from Mexico in the United States.

The large number of countries using English either as an official language or as the lingua franca reinforces this pattern. Large proportions of international students from English-speaking countries are enrolled in tertiary education in other English-speaking countries, including Australia (18%),

Canada (more than 30%), Ireland (more than 40%), New Zealand (more than 40%), South Africa (more than 80%), the United Kingdom (more than 30%) and the United States (25%). On average across all OECD (Organization for Economic Growth and Development) countries in 2012, around one in four international students came from a country with the same official or widely-spoken language as the country of destination (Education at a Glance, 2014, p. 346) (Table 1).

Table 1. OECD and partner countries offering tertiary education programs in English (2012)

All or nearly all programs offered in English	Australia, Canada, Ireland, New Zealand, the United Kingdom, the United States
Many programs offered in English	Denmark, Finland, the Netherlands, Sweden
Some programs offered in English	Belgium(FL), the Czech Republic, France, Germany, Hungary, Iceland, Japan, Korea, Norway, Poland, Portugal, the Slovak Republic, Spain, Switzerland, Turkey
No or nearly no programs offered in English	Austria, Belgium(Fr.), Brazil, Chile, Greece, Israel, Italy, Luxembourg, Mexico, the Russian Federation

3.3. Challenges in teaching international students

It should first be noted that the main problems in terms of teaching international students is the linguistic problems, namely, the level of language proficiency required for training. We means the quality of academic English language skills for non-English-speaking students and/or official language proficiency of recipient country, for example, the Russian language in Russia, Spanish international language in Spain, French language in France, German language in Germany and the like.

Considerable evidence NR TPU supports fact, that international students can't successfully master really sophisticated Russian language in preparation course for language improvement even over two years. Therefore, while international students begin teaching professional skills, the difficulties in the relationship between teacher and international students, as well as between international and local students come. The international students are tutored in standard Russian-language group and, in Training Programme Manager views; their language level must reach the level of native-speakers. But in fact, the language level of international students corresponds to level A2 (Elementary), it will not serve for purposes of professional development, especially in technical areas, which abound with technical terms and definitions.

In addition, there is the same problem with English language proficiency. However, the international student's level of English declared in accordance with the language standards does not correspond to the reality. Again, the core problem that meets the teacher of international students is discrepancy between teacher's linguistic ability and the level of student's linguistic competence.

A second area of difficulty for international students is the intercultural communication. Whilst international students are in a foreign academic culture, far away from home, they are stressed. For them the culture shock is caused by the differences between the conventions of the students' origin country and those of the country of destination (Oberg., 1960). It should be noted that some students lose their motivation to learn due to psychological disturbance, anxiety, and mental disorders. In this case often the teacher takes himself a function of psychologist or friend, but not only academic advisor.

Furthermore, the level of knowledge of the field of study in the senior school is not enough to understand physical phenomena, chemical process and the like, if international students are ill-prepared for the demands of university science.

Meanwhile, the international students and the native-speaker differ in their information processing speed due to efficiency of thinking skills. The international students never master a foreign language

as native-speakers, even if they have upper intermediate levels. Thus wise, international students tackle problems translating them from English (or Russian) into native language and thereby waste the time.

Nonetheless, the differences in motivation between international and local students may be significant. It follows that if international students are not interested to learn about essential subject matters, the teacher not only has to motivate the learners, but also just has to keep the spirits up.

Just one last note, it is difficult for the teacher to assess the international students qualifications, to determine how those compare with the local students qualifications. This is intimately linked with diligence and accountability of international students. It seems to us, that these capabilities are assessed by the teachers rather than the knowledge of international students due to the level of language available to deliver the required outcomes.

Based on the factors considered above, we ask the following question: Is there the possibility to solve these problems?

3.4. Innovative teaching methods as problem solving techniques in terms of teaching international students

In order to attempt to answer this research question, we used questionnaires among lecturers, those teaching international students in NR TPU (departments of Engineering Entrepreneurship and Geology and Oil Field Development). The information on questionnaires is obtained from the 30% of these lecturers aged between 40 and 60, having teaching experience of more than 10 years. In addition, 90% of them have an academic title. Among selected participants 20% are men. According to questionnaires, 80% of selected lecturers mention, using of the innovative teaching methods in addition to the individualized approach improve the efficiency of international students teaching. However, they noted that being at the beginning of the teaching they thought the lecture is the most effective way of teaching international students. Furthermore, preparation of lecture in foreign language is ordinary by contrast to innovative methods. Significantly, it being understood that remaining 20% of selected lecturers are the experienced teacher, having teaching experience of more than 30 years. It can be noted that participants indicated that reasons for not using of the innovative teaching methods are the complexity of preparation and lack of time to do it. The process of preparation for innovative teaching session usually takes between 4 and 8 hours as the teacher not only has to transfer knowledge, but also just being the consultants and partners for the students throughout the education (Sachou, 2013). Due to this lecturer must have a broad-based knowledge to answer unexpected and controversial topic of students, therefore it requires much competence and professional qualification of teachers (Altbach, 2013). By "innovative methods" we mean methods which use the present-day science development and information technology increasing the quality of education due to the creativity and the diligence of international students (Kirilov, Leontyeva, Moiseenko, 2015). Using of the innovative teaching methods create an approachability to breaking the stereotype (Gutkevitch, Leontyeva, Eremina, 2010), to form new aspect of subject matter, to keep up-to-date with professional development, and creativity of international students (Robinson, 2011). These teaching methods could take advantage of extended possibilities for student skill and competence development. In particular these methods include; games projects (role game and business play) (Grosu, 2012), team working and small group techniques (small group work), group research projects (Dulzon, 2013), case-study method, problem based learning, self-directed learning, situated learning, interdisciplinary learning, brainstorming session, mind map, experiential learning, IT-method (Damodharan, 2012) and other methods. Let us give examples of their application to practice for international students teaching.

3.5. Case study

This method involves the analysis of specific situations. It is designed to improve the skills and gain the experience in the identification, selection and solving of problems, understand the value of the

items described in the situation, work with the assumptions and conclusions, evaluate the alternatives and make a decision. The direct objective of this method is to analyze a particular situation (a case) within the joint efforts of a group of students or individually and work out a practical solution, which is the best in the context of the problem and possible alternatives.

Solving specific situations to overcome culture shock the students not only learned the phases of culture shock and their duration they also felt this shock by themselves being in the described situation. They also found ways to overcome culture shock being within other culture. One of the cases offered to the students was the following. A professor of German language from Texas planned a trip to Germany. He was delighted with the fact that he had the chance to conduct research in Germany, and he was not embarrassed by the fact of being alone in a foreign country. On arrival to Germany a professor found a group of teachers and officials who, in his opinion, could help him in the study of cultural traditions that characterize the Germans. But it seemed that nobody was interested in his project. Every day a professor lost his enthusiasm. After several months of unsuccessful attempts to start his project, he began to blame other people for cold attitude, and moreover for obstructionism. It seemed to him that people with whom he spoke, trying to downplay his efforts, because he was an American. He being afraid of causing any physical injury to someone locked himself up in his room and did not leave it until the end of trip, for almost six months (Seelye H.N., 1994).

3.6. Work in small groups

After getting a picture of the subject the students start to study the best known methods of learning of the business cultures. The teacher offers 4 classifications of business cultures descriptions, which include a method of American anthropologist Edward Hall, of Dutch researcher Fons Trompenaars (1993), a method of British scientist Richard Lewis (2008), and of Dutch scientist Geert Hofstede (2003). The students were asked to work in small groups of 4-5 people. Each group had to study one of the classifications (according to the list of reference offered by the teacher) and present this material to other groups. They had to tell about author's biography, the history of the method, a description of the method. The work in small group supposes a joint activity of students under the guidance of a leader. Activity of the group has to be focused on the solving of the general problem by adding the results of individual work of group members. The authority and responsibility should be shared between the group members. Group work stimulates the coordinated interaction between the students, the relationship of mutual responsibility and cooperation. The advantage of group work is that the group is a micro model of public reactions to the behavior of an individual. Each participant showing his usual relationships with others can see and realize their limitations and inefficiencies, and try to change his way of relationships. Thus, each participant can see themselves and his problems with other points of view. The group supposes an exchange of experience in creating and solving problems. In such work the members of each group became an expert in the method of estimating a business culture which they represent. In order to solidify knowledge of these methods the following individual tasks was offered to the students: to create own case (on the basis of own experience, literature, movies), to describe the culture of any country according to the selected methods.

3.7. Team projects

At the end of the course the students have to prepare a team project. The project-based learning supposes the development of students' cognitive skills: The ability to independently design their knowledge and to navigate in the information space, as well as the development of creative and critical thinking. The project-based learning always assumes problems solving involving the application of systems analysis and interdisciplinary approach. The results of the projects should be "tangible". It means that if there is a theoretical problem a concrete solution has to be offered, if there is a practical problem, there must be a concrete solution, which is ready to implementation. All the projects are focused on specific goals; they are limited in time and involve the coordinated and interrelated activities. The work on project begins with the project specification (definition of the subject, the

formation of teams, the definition of objectives and problems that have to be solved), the project development, presentation of the results and reflection. As we know, the same functions are carried out by the manager; he plans, organizes (coordinates), monitors and analyzes the results of the project. That is why we consider that the use of the project-based learning in the training of managers is particularly relevant.

In our point of view the most important projects are the interdisciplinary group projects, such as used in the University of La Laguna (Spain). The project includes the preparation of business plans by multidisciplinary teams of students studying in the field of chemical engineering, industry, construction, and computer technology and business management. As a result after taking part in such project the students are more interested to start their own business in comparison with the total population of Spain (García-Rodríguez, Gil-Soto, Ruiz-Rosa, 2012).

This project aims to develop the ability to solve problems of intercultural communication using the tools that have been learned during the study. The group of 22 students is divided into 5 small groups of 4-5 people. Then the group members decide who will be a team leader; this person will be a project manager. The project manager distributes the authority among the team members. First of all the purpose and the objectives of the project have to be defined. The purpose of the project is to make recommendations for solving any potential problems of intercultural communication in the framework of a real international project of building a gas pipeline to China. The topic of this project had been selected not by chance. In a city where the students are taught there is the head office of the company that implements the project "The Power of Siberia".

It should be noted that the start of the work on the project and the results presentation take place in the presence of a manager of the company that is carrying out a gas pipeline construction project in China. This is an additional motivation for students for qualitative work on the project. "The Power of Siberia" the representative of the company gave the technical characteristics of the project, deadlines, and estimated costs of the work, the possible risks and the project stakeholders. The results of this project were proposed to managers of the company in order for overcome the problems of intercultural communication in the framework of the project "The Power of Siberia".

3.7. Mind map

The final work for the students in the study of the subject is to develop the mental map of the course "Intercultural Management". The main differential characteristic of the mental maps is that this technique allows to use the work of both hemispheres of the brain and thereby to synchronize their activities. This is a useful tool for displaying the process of thinking and structuring the information in a visual form. Their advantage is that on one sheet you can easily see a complete picture with the relations, structure and logic. In the process of drawing of the mental maps you develop not only the logical thinking but also a creative thinking and you train a memory and imagination. In this context, the mental map allows you to capture the entire studied subject at a glance, to remember and learn it easily and to use both hemispheres of the brain that is necessary for the development of creative and logical thinking. The mental map construction is supported by iMindMap, FreeMind, The Personal Brain, Xmind, Free Mind Map – Freeware (Leontyeva, Timkina, 2013)

3.8. Information technology

All of these training methods were used with the help of information technology. IT-methods allow using in the learning process the computers with an access to the Internet resources. They also enable to use a variety of training programs that expand the information field and ensure the transformation of the modified and structured information into the knowledge, and allow presenting the results of their work with the help of multimedia.

4. Conclusion

According to the experience described above of the application of innovative teaching methods it awakes students' interest in training and cognitive activity that allows creating an atmosphere of motivated and creative learning. In accordance with the results of the survey that was conducted among the students on the topic to what extent they are satisfied with such form of classes we got the following answers. 80% of the students noted that they are very satisfied, and 85% said that their training for this course was successful (Zinchenko, Leontyeva, 2015). Also 94% of respondents pointed out the high relevance of gain knowledge and the possibility of its use in their future careers. 61% of the students would like to continue to explore the subject in research activities.

The application of the mentioned methods can help to solve a range of learning tasks, including development of the following competencies that are essential for the managers in the global intellectual market:

- To organize a teamwork for managerial problems solving.
- To build clear spoken and written language logically and with reasons.
- To implement business communications: Public speaking, negotiations, meetings, business correspondence, electronic communications, and etc..
- To evaluate critically personal strengths and weaknesses.
- To use a foreign language in interpersonal communication and professional activities.
- To set goals and formulate the tasks related to the application of professional skills.
- To analyze and design the interpersonal, group and organizational communications.
- To make decisions and take responsibility for decisions.
- To adapt to other business cultures.
- To develop the ethics of professional manager, cultural sensibility and tolerance.

In this study, we have demonstrated that using of the innovative teaching methods improves the efficiency of international students teaching, that it makes itself felt whether in ability to make decisions independently in a foreign academic culture, far away from home, or in faculty of learning and demonstrating result in foreign language. So, both simulation training of professional activities and effective personal integration of international students illustrate that innovative methods promise to revolutionize high education.

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