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For doctoral students specializing in journalism, the challenge to publish the research and development, at first seemed an impossible task. Occupation journalist has its own specific and original and independent opinion is valued in it. Whereas scientific style requires restraint and argumentation.

Therefore, from the doctoral specialty "Journalism" can often hear complaints about the inconsistency between professional competence and - the scientific method. However, in order to bring their knowledge to the reader, the author must learn to master the methods of data journalism.

Having studied many publications in journals with impact factor, we noticed a definite trend. Humanities research is now similar to the natural, as the authors use diagrams, tables, graphs and statistics for the reasoning and visualization of its findings and theories. Noticeable thus interdisciplinary paradigm.

In general, in order to succeed in achieving this goal, the author - a young scientist, and his mentor have to revise the amount of reliable data, archives, search for the original sources. Further, comparing their findings with the publication of colleagues over the past few years show the favorable side of his studies. It is important that the development is beneficial to humankind, the obvious positive benefits of the project.

Thus, the road by walking (proverb). It is important to investigate their chosen field, to understand the socio-economic situation, the cause-and-effect relationships. Knowledge of the basic laws of dialectics must! To avoid possible disappointment, the author must learn to carefully examine the requirements of the magazine and correct reviewer's comments. Patience and hard work to succeed.

The above provisions are based on the experience of working with masters and doctoral students, as well as the practice of successful publications in journals with non-zero impact factor. Using our method will allow graduates of Al-FarabiKazNU to be in demand and competitive in today's conditions. The labor market presents significant opportunities for young graduates. The University is able to export our educational programs, provided quality selection in the master's and doctoral, master a foreign language (English). Science University library, IT communications, external communications with employers form the basis for an excellent study and doctoral theses.

Mussiraliyeva Sh.

APPLICATION OF MEDIS PROJECT METHODOLOGY for AUTOMATION and CONTROL SPECIALTY AT INFORMATION SYSTEMS DEPARTMENT

Latest requirements in production, business and society have a strong influence on teaching methods and content of engineering education today. Modern engineering projects cover technical, but also management, social, economic, and many other aspects that significantly affect their complexity. Specificity of tools and mechanisms for formation of a new quality in a competence-based education system requires a careful study of Kazakh and foreign experience in innovative education as well as ways of introducing them into traditional educational system. The problem of training's quality is a central issue in their demand for domestic economy and international recognition, which is directly related to the content of education and implementation technology of educational programs. Nowadays, throughout the world there is an active transformation of engineering education aimed at developing competencies required by professionals, in particular at ability of their application in practice

The Information Systems Department of KazNU named al-Farabi trains specialists on the next specialties:

Bachelor's Degree. 6B070300–Information Systems; 6B070200– Automation and Control;

Master's Degree. 6M070300– Information Systems; 6M100200–Information Security Systems; 6M070200–Automation and Control;

Ph.D. 6D070300– Information Systems, 6D100200– Information Security Systems, 6D070200– Automation and Control.

In winter of 2014 an international project MEDIS (A Methodology for the Formation of Highly Qualified Engineers at Masters Level in the Design and Development of Advanced Industrial Informatics) started as part of TEMPUS IV - 6th Call for proposals program. Given the above, this project is an excellent opportunity to adopt innovative teaching methods of European universities for quality education of engineering students. Designing an industrial automation project requires a good knowledge and understanding of the requirements and potential solutions. Transforming the design into reality in turn requires engineers capable of configuring, programming, and installing these domain specific hardware and software solutions. Commercial companies and industry therefore need qualified personnel in the domain of industrial automation, and the initial qualification is typically obtained at higher education institutions. MEDIS project aims to adapt master training programs for engineering specialties from EU partner universities by including in programs the Advanced Industrial Informatics Specialization Module (AIISM) aimed at training professionals in engineering design and development of industrial information systems using microcomputers, industrial computers, mobile and cloud computing platforms for decentralized control and management of complex processes. Such courses will contribute to preparation of highly skilled engineers who will be able integrate easily into labor market. Moreover, involvement of such engineers in production will help increase productivity and competitiveness of companies, thus contributing to development of the whole society [1].

The objectives of the project are:

– offer PBL (problem-based learning) methodology and develop resources for teaching the proposed modern industrial informatics specialization module (AIISM);

– review the curricula of universities in partner countries and adapt AIISM in order to integrate it into specific training

programs in each partner country;

- develop training courses and train teachers, support and administrative staff in the partner countries;
- implement AIISM-PBL methodology in the partner countries and contribute to its further use;
- evaluate the results of AIISM implementing;
- disseminate experience and results of the project among interested parties.

The methodology aims to create a working environment for students that is as close as possible to the working environment in industrial companies.

The teaching consists of:

1. Lectures: that describe the main idea by showing examples of corresponding applications.
2. Seminars: that discuss solutions to the stated real problem proposed by the group.
3. Laboratory classes: where students apply the proposed solution.

4. Mini-projects: that teach to plan, design and develop solutions for effective control of distributed and complex manufacturing processes.

Methodology is based on problem solving, Problem-Based Learning or "PBL". This methodology is a kind of active learning. It is based on problem solving, where students build their knowledge based on problems and situations from real life. Meanwhile, they also exercise in the process of reasoning that will use in their future professional job; evaluating and integrating the acquired knowledge to achieve professional technical expertise in their specialty. The essential feature of the PBL methodology is the using of problems as a starting point for the acquisition of new knowledge, and the concept that the student is the protagonist of their learning progress. With this method, applied to the Industrial Computing, the student is empowered to take the roll of "designer" of an Industrial Computer Application, and throughout the course, "designers" attain new knowledge, skills and attitudes as it happens in the day to day in an real project office. Designers must be able to analyze and deal with the proposed design of an industrial computer system, the same way they have to do during their future professional job. This model is based on the educational goals proposed by the Accreditation Board for Engineering and Technology (ABET) [2] and different experiences [3,4].

Proposed method of learning requires specially equipped laboratory classes (industrial computers, microcomputers, simulators, etc.). At this stage of the project works on the purchase of related equipment is being carried out. AIISM module consists of 5 sub-modules:

- Industrial computers;
- Microcomputers;
- Mobile and cloud computing platforms;
- Industrial networks and protocols;
- Industrial controllers and simulators.

Project executors from Kazakhstan and foreign countries:

- Universitat Politècnica de Valencia (Spain)
- Malardalen University (Sweden);
- Technical University of Sofia (Bulgaria);
- University of Stuttgart (Germany);
- University of Porto (Portugal);
- al-Farabi Kazakh National University (Kazakhstan);
- S. Toraigyrov Pavlodar State University (Kazakhstan);
- Saint Petersburg State Polytechnic University (Russia);
- Petrozavodsk State University (Russia);
- Odessa National Polytechnic University (Ukraine);
- Ukrainian National Technical University (Ukraine).

According to the plan of MEDIS project the new curriculums were elaborated for the specialties of Information Systems, Information Security Systems, Automation and Control. Five new courses were introduced for 2015-2016 educational year. Part of curricula for corresponding specialty is shown in table 1.

46 students chosen and passed exams on MEDIS courses during 2015-2016 educational years

Table 1. 6M070200– Automation and Control

Module	Code	Discipline name	Credits	Semester		
				I	II	III
Basic disciplines						
1.2. Elective module	Elective module #2 ASUSTMSS AU 5206	Microcomputers	3	1+1+1		
	Elective module #3 IK 5207	Industrial computers	3	1+1+1		
	Elective module #4 KSUTP 5208	Industrial controllers and simulators	3		1+1+1	

Specialized elective disciplines						
2.2. Elective module	Elective module #3 MOKP 6307	Mobile and cloud computing platforms	3			1+1+1
	Elective module #4 6308	Industrial networks and protocols	3			1+1+1

Each course has a foreign teacher who helps our teachers to elaborate new educational course. The names of courses and corresponding leaders are shown below:

1. Industrial Networks and protocols, University of PORTO, Dr. Mario de Sousa
 2. Industrial Computers, Universitat Politècnica deValència (UPV), Dr. Houcine Hassan
 3. Microcontrollers, - USTUTT - University of Stuttgart, Dipl. Ing. Michael Seyfarth
 4. Industrial controllers and simulators , TUSofia - Technical University of Sofia, Dr. Valeri Mladenov
 5. Mobile and cloud computing, MDU - Mälardalen University , Dr. Dobrin Radu
1. Mobile and cloud computing, MDU - Mälardalen University , Dr. Dobrin Radu



Figure 1. "Advanced Industrial Informatics" laboratory



Figure 2. "Industrial controllers and simulators" laboratory



Figure 3. Prof. Mario de Sousa teaches Medis course "Industrial networks and fieldbuses" at Porto University, July 2016



Figure 4. Laboratory work, Prof. Mario de Sousa's classes at KazNU

Teachers of Information system Department prof. Yeraliyev A. and prof. Belgibayev B. attended course "Programming on logic controllers Siemens (SIMATIC S7-300)" which was organized by KazNU and FESTO company. Consultations of experienced professors from EU partner universities and purchasing equipment under Medis project allow KazNU to open 2 laboratory rooms - room #6 "Tempus Medis. Advanced Industrial Informatics " (see figure 1) and room #5 "Industrial controllers and simulators" (figure 2.). So students have possibility to improve their practical skills and classes are more qualified. KazNU invited to teach the MEDIS course "Industrial networks and fieldbuses" the leader of this course prof. Mario de Sousa. After that 6 students attended Summer School organized by prof. Mario de Sousa at University of Porto (figures 3,4)

It was signed the agreement of collaboration between KazNU and Sant-Petersburg Polytechnic University in 2016. Sant-Petersburg Polytechnic University gave 7 student scholarships to attend Summer school. 7 students learned during 2 weeks additional themes under Medis courses this summer (figures 5).

The Workshop "Formation of highly qualified engineers within IIDSP-2" (Industrial and Innovative Development STATE PROGRAM -2) and Governing Board meeting of project partners were hosted by the al-Farabi Kazakh National University and were take place on June 1-5, 2016. The purpose of the meeting was to discuss results and to establish the tasks for further performance of the project according to the Work plan. When MEDIS partners arrived to Almaty to take part at the workshop "Preparing ICT specialists for company NPIID-2" Eltex (industrial company) and PIT Alatau (park of innovation technology) invited them to show companies works. It shows a big interest of industrial

company to Medis project results. 15 students which learned all 5 Medis courses are working on Labwork at Eltex company now. The results which were discussed during the Workshop "Formation of highly qualified engineers within IIDSP-2" published as a Proceedings of the first international practical workshop for company NPIID-2 [5].



Figure 5. Summer school at Sant-Petersburg Polytechnic University

References:

1. Welcome to MEDIS. 2015. Retrieved from www.medis-tempus.eu.
2. ABET. 2012. Criteria for accrediting engineering programs. Retrieved 03-21-12 from <http://www.abet.org/DisplayTemplates/DocsHandbook.aspx?id=3143>.
3. Hassan Mohamed Houcine and others "A Hybrid Structured Methodology for Developing Computer-based Industrial Computer Systems" International Conference on Frontiers in Education (FECs). Las Vegas (EE.UU.) 2012
4. Houcine Hassan Mohamed and others "An innovative proposal for the Industrial Informatics subject". International Conference on Engineering Education (ICEE). Valencia (Spain) July 2003
5. Book: "Proceedings of the first international practical workshop for company NPIID-2", Almaty, 2016 (ISBN 978-601-04-2547-7)

Strautman L.E., Gumarova Sh.B.
CONTRIBUTION OF THE TEACHERS OF ENGLISH TO THE SUCCESSFUL IMPLEMENTATION OF THE PROGRAM "100 CONCRETE STEPS"

According to the new presidential program "100 concrete steps" Kazakhstan is planning a phased transition to teaching some subjects in the English language in high schools and universities. In November 2015, Kazakhstan adopted the 2020 Trilingual Education Road Map Beginning from 2019-2020 academic year the subjects "Information Technology", "Chemistry", "Biology" and "Physics" will be taught in English. Kazakhstani students in the upper grades will soon be taught classes in English. This is provisioned by the new presidential program "100 concrete steps." "A phased transition to English language in the education system will be taking place in high schools and universities. The main objective is to improve the competitiveness of graduates and increase the export potential of the education sector," is stated in the document [1].

Introduction of the trilingual system of education in Kazakhstan requires intensification of efforts in learning and teaching the English language. It should be noted that the multi-language education program implemented in Kazakhstan is a unique and, unlike its Western analogies, implies a parallel and simultaneous training in three languages [2]. An effective higher education system is a core element of a successful society and economy. "We are increasing the pace of introduction of trilingual education. This is not a fiction, it is not a wish of someone, it is a necessity. Already 20% of Kazakhstani citizens speak English, and the knowledge of three languages is a pass to the global life, it is a base of success in life. In the global world our children will be citizens of our planet – they will have to work everywhere, and they must be like a fish in water in a complex world," these are the words of the President of Kazakhstan.

The task of universities is to train specialists who will be able to teach science in school in English. In the framework of the program the courses were reorganized for the university teachers of Physics (5B011000) and Biology (5B011300) in compliance with the experience of basic higher education institutions of SPIID and State assignment program. The course program included on-line teaching. The teachers attended 240-hour courses English courses at Al-Farabi University Institute of educational development and professional improvement within the framework of intensive training program of pedagogical personnel. and passed the exams according to their level. It was an important contribution to the improvement of the level of English of the university teachers and professors.

How is the problem of training present-day high-qualified specialists solved by the teachers of English?