МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РФ

НАЦИОНАЛЬНЫЙ ОФИС ПРОГРАММЫ TEMPUS В РОССИИ

ГОУ ВПО «АСТРАХАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ»

Европейская Комиссия
TEMPUS

АГУ

ИНТЕРНАЦИОНАЛИЗАЦИЯ ОБРАЗОВАНИЯ В РОССИИ, ВКЛАД ПРОГРАММЫ TEMPUS

Материалы Международной
научно-практической
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г. Астрахань
19–20 апреля 2010 г.

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Рассматриваются вопросы интернационализации образования в России и странах СНГ, инновационные технологии в образовании, а также вопросы проектирования новых многоуровневых программ высшего профессионального образования.

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ОГЛАВЛЕНИЕ

ВВЕДЕНИЕ

Программа Tempus – одна из самых длительных программ Евросоюза, она успешно функционирует уже 20 лет. Программа направлена на межвузовское сотрудничество Евросоюза со странами-партнерами, а также поддерживает модернизацию высшего образования. Одним из основных стратегических направлений ЕС в политике добрососедства является высшее образование. Это один из тех мостов, которые Европа старается проложить к странам-партнерам.

Целью конференции «Интернационализация образования в России, вклад программы Tempus» является обмен научно-методическим и проектным опытом участия в реализации программы Tempus, распространении результатов проектов в европейском образовательном пространстве в целях совершенствования качества профессионального образования, расширения академической мобильности, взаимного признания результатов.

Сборник содержит материалы конференции, в которых рассматриваются вопросы интернационализации образования в России и странах СНГ, инновационные технологии в образовании, а также вопросы проектирования новых многоуровневых программ высшего профессионального образования.

Tempus Project in Kyrgyzstan – the Case Study

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Background

Labour market changes quickly. The development of technology, the needs, the diverse of economic and political events have an increasing demand for workers in certain occupations. Usually a period of several years increase the level of the needs is followed by its decline. Much of the professionals in the profession is no longer needed and can not find the work. Fall in demand is a natural result of the depletion process needs in the area and increase productivity. This phenomenon is particularly important in countries with highly dynamic development of the economy (the so-called economic tigers), restructuring (an example can be economic changes during the last quarter of XX century in Poland and Spain), rebuild after the war and natural disaster (e.g. tsunami wave), and even taking the organization unit, a large, global projects. A particular dimension of the phenomenon is becoming an era of economic crisis, during which there are substantial changes (e.g. winding up production on the area) in the labour market.

Changes in the labour market are a result of technology changing. New emerging technology begins to displace the old, return it to it after a certain period in the history of granary - unfortunately with the knowledge and skills of people who implement this technology. In practice, all areas of technology change takes place in less than a period of active working life of employees. In some areas, this change is measured a few years. Such is the rapidly developing fields. Computer Science (CS) or Information and Communication Technology (ICT) and its technical base is one of them.

The phenomenon of variation in demand for professionals with specific competence is known for many years. It leads to the fact that the modern worker in the course of their working lives, many times not only changes the place of work, but also the profession. This means that from the perspective of the individual human being, need to change the qualifications. Such a requirement is particularly painful for professions with high skills and knowledge requirements. Highly educated people with great experience, but unfortunately now unnecessary, are before extremely difficult decision - to abandon all of the achievements of professional and start all over again.

Employees' decisions to change the profession may also be due to the often observed phenomenon of "occupational burnout". Occupational burnout it has increasingly dispiriting an employee for the job, the accumulation of stress, limiting the ability to grasp new knowledge and skills. It leads to a reduction of creativity and productivity of workers, in spite of it seemed to be ever greater experience. In some professions, it brings to commit a critical error (and crash), in others - to reduce productivity. In this situation the only option for the worker is to change the profession - often a very radical.

There are many possible ways to change the occupation, depending on the level of required skills: knowledge and practical skills. Gaining practical skills on a variety of training courses, professional practices, participation in the work under the supervision of mentors, etc. Such continuing education is already the rule in many professions and is mainly dependent of the skills of workers, rather than changing their profession. Acquiring new skills, particularly in a completely new profession with high expectations in relation to the qualifications of workers, is a more long-term process. This requires the repetition of the cycle, usually 3 or 5 years, at a higher level of education. This is an arduous process, long-termed and very heavy for employees, including financial aspects.

Inertial of the training or qualifications change often leads to negative consequences in terms of global (i.e. for the whole country). The increasing demand for concrete professions results that the education system begins to educate (or retrain) more and more people in this profession. Long training cycle means that after 5-6 years on the market there is the increased number of qualified graduates with specific skills. The demand for them is quickly met and emerging new graduates do not have jobs. Creation of surplus. Meanwhile, a lack of workers in other occupations. Lack of employment is an anti-advertising studies, which in turn reduces the number of people. This reduction has consequences only after a few years. The education-labour market begins to oscillate, that is: oscillates the needs and supply specialists. The longer the cycle of training in the profession and a greater dispersal of the greater problems in the stability of such a system

The solution to the problem would be the system of education that will prepare from the beginning of workers to change occupation, and preferably one that will be studied at once in many different specialties. However, this was not done in a very long series.

Tempus project – assumptions

The Tempus project (JEP-26235-2005) was began in September 2006. Whose goal was to implement higher-education of second-degree studies in the direction of computer science as an second education in the Kyrgyz National University, Bishkek, Kyrgyzstan. The consortium implementing the project includes, in addition to the beneficiary (i.e. Kyrgyz State University of Bishkek) and a leading institution which is University Pierre-Mendès-France Grenoble, the following universities: University of Alicante (Alicante, Spain), University of Genoa (Genoa, Italy), and the Lublin University of Technology (Lublin, Poland).

The essence of this project is to start new CS studies and to change the ways of CS teaching at the Kyrgyz National University of Bishkek, to introduce the new content in the process of teaching, to prepare academic staff from Kyrgyzstan to develop teaching materials, as well as to practical implement of e-learning platform.

The project involved the following main stages:

- **Initialisation**: the preparation of the framework program of study to obtain a license (accreditation) from Ministry of Education and Science of Kyrgyzstan for the opening of masters program.
- **Preparation**: development of specific subjects syllabuses, educational materials, strengthen the hardware of Kyrgyz National University, launch the e-learning platform and prepare human resources (carried out the placements by academic teachers from the Kyrgyz National University in European universities and teaching seminars carried out by academics from Europe in the Kyrgyz National University).
- **Implementation**: recruiting students, realising the process of teaching and its evaluation by the teachers from Kyrgyzstan and Europe (including the area, an interesting accent was a competition for Kyrgyz students prepared for the best application in the context of the course Software Project, whose primary objective was to motivate students to appreciate and their actions).
- **Dissemination**: announced in the press and the Internet and organization the International Final Conference in the Bishkek.

The first recruitment of students planned originally to ra 2008/9 has been accelerated by the Kyrgyz partner and first students began their studies in October 2007.

The study program

In academic year 2006/7 has been developed and stable the curriculum framework. It covers the majority of items that can be found in a typical program of the Computer Science study. The whole comprises almost 1,300 hours classes, including nearly 60% of practical classes - the laboratory. In

addition, the program of study includes 4 months of professional practice (about 640 hours) in organizations related to information technology.

One important element in the education is team, two-semester software project, carried out during the semester 3 and 4.

During the creation of the program of the study, synchronization was an important issue, which was particularly difficult in the face of short time of studies – 2 years, in practice 3 semesters, because fourth semester is primarily intended to prepare a master thesis in the course of long-term (640 hr. = 4 months) of professional practice. Practically, most managed to sort the items in logical sequences (Fig. 1). In a few cases diagnosed with the need to synchronize the content programming within a given semester (interrupted lines in Fig. 1).

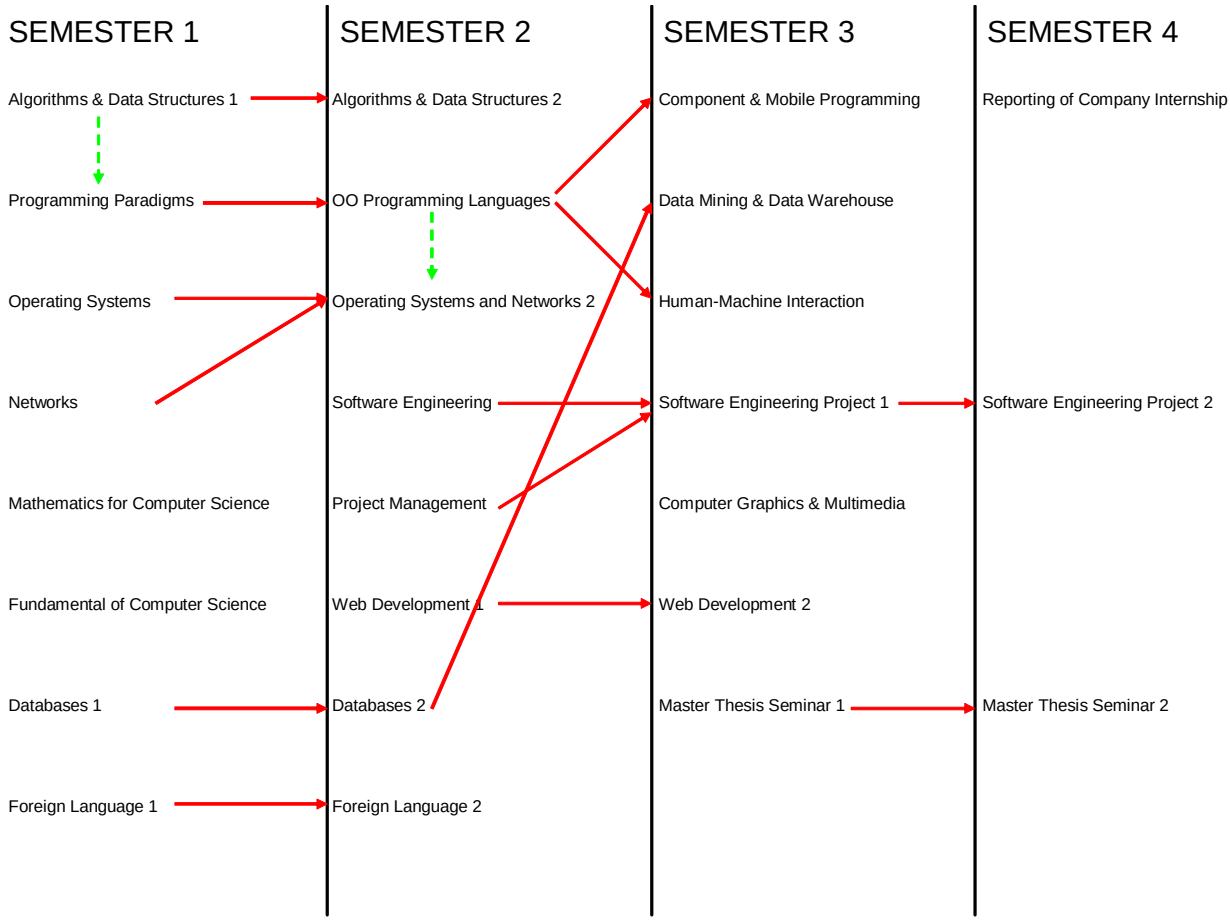

Figure 1. The links between the courses of second degree for social science graduated

The project realization

Implementing the Tempus project proceeded essentially as planned. There is, however, some modifications. They resulted mainly from the Kyrgyz partners' decision to accelerate by one year the recruitment of first year students. The decision is well justified by the Kyrgyz partners, and useful for the project and has been approved by all of the project executers.

Accelerate the start of study demanded accelerate the development of specific content of curricula, teaching materials and the preparation of teachers from Kyrgyzstan. This has led to accelerate academic practices from Kyrgyzstan at the universities of European partners.

Selected statistical results of the project presents the Tab. 1.

Table 1. Basic statistics of the Tempus JEP-26235 project

Results	***Numbers***
Number of courses developed	38
Number of trainings in EU universities performed by Kyrgyz academic teachers	18
Number of seminars provided by EU teachers in Kyrgyzstan	9
Number of publications	10

Summary

The primary objective of educating students in the second direction is to prepare them to change their profession (or educated and not taken) to another. Another very important element is to train scientists who well known the relevant area of IT. These excellent computer scientists prove correct on the situation on the border activities of information technology and applications. They may be one of the highly skilled users of the technology, or creators of the new one. Knowledge of the area of ICT supports their activities in the area of analysis, design, testing and implementation of information systems (and thus virtually all stages of the life cycle of the application).

These are the advantages. And what about disadvantages?

An important problem in this type of custom studies is the requirement of standardisation and quality education. Standardisation strongly associated with the rules, recommendations, and the recognition of the accreditations, interchangeability of qualifications. Any state, which take care of the quality of education creates a framework for requirements for specific, clearly defined and very often the homogeneous directions of education. These requirements must be satisfied that it can be attributed to the first professional level (bachelor or engineer) or the second degree (master). It is difficult to meet them (especially in the case master study) in a completely new direction for students in two years. One of the solution issue is the entitle "special" title: MSc second competence (education). This arrangement is used in France and it has been applied well in Kyrgyzstan.

It should be noted, significant challenge posed by the students studied. It is a very high intensity training. It follows from the fact that in two years implemented a basic program of study at the Computer Science. This is a big challenge for students, which not all are able to cope.

The introduction of a new master's program in the Kyrgyz National University is the result of joint operations team from 5 countries in the framework of the EU Tempus project. In this case, the main aim of the project - to assist the restructuring of the education system in the third approximation to the standards of European Union - its worth 100%. The project was implemented within a given area (even slightly expanded competition, with acceleration of the start year of training, publication of teaching materials), time and budget. So there has been a success.

It remains to be hoped that the master program will be continued even after the completion of the project and will contribute to the strengthening of Kyrgyzstan economy well prepared human resources in the area of Computer Science.

Positive experiences from the Tempus project (JEP-26235-2005) will be expand through the Tempus project (159025-TEMPUS-1-2009-1-FR-TEMPUS-JPCR) “Network Europe – Russia – Asia of Masters in Informatics as a Second competence” (ERAMIS), started in 2010.