

Administration of international cooperation in education through ICT in Slovak republic

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1. EXECUTIVE SUMMARY

Paper deals with analysis of EU available systems, which form the software support of management study abroad and international cooperation. It consists of two parts - analysis of approachable nowadays used systems in particular countries in the first part and further analysis and possibilities of using ICT in Slovak republic.

To be able to define adequate conditions about access to information about study abroad at universities through ICT, we have carried out analysis of universities needs in Slovakia. We asked particular universities to send us information which services and information they provide, which systems they use, which specification in process they assert.

We describe also further in the paper the proposal of the complex information system, which creates appropriate conditions for providing informational needs to access information about study abroad at universities through internet in Slovak republic. In the pilot solution we have focused on module Erasmus, as through it leaves to abroad almost 80 percent of the total amount of university students from foreign exchanging program's.

2. INTRODUCTION

One of the key problems of the effective communication, coordination and verification development in the knowledge society belongs to quick and effective providing of guaranteed information, to possibility of its quick and flexible searching and to mediating and exchanging of valid experiences and knowledge as well. To ensure these processes in desired quality and extension can be real nowadays only with the help of the information and communication technology. They require the fulfilment of the basic conditions - technological equipments and informational literacy of the people.

3. OPPORTUNITIES TO STUDY ABROAD

Main agencies and institutions, which administrate study abroad programs in Slovak republic are:

- Ministry of education.
- SAAC.
- SAIA.

Slovak academic association for international cooperation is a voluntary association of personal and corporate entities, which goal is to support and coordinate programs of international cooperation of Slovak universities and other institutions, mainly with countries of European commonwealth within educational and other programs.

Association in its actions mainly:

- create an information system about realized programs and about other international activities,
- provide information and consult services about international training and other programs,
- organize national and international seminars and conferences,
- promote Slovakian educational system in abroad and publish information materials.

Programs SAAIC:

- Comenius
- Erasmus
- Leonardo
- Grundtvig
- Sectional program
- Program Jean Monnet

Slovak academic information agency is a non-governmental organisation, which from 1990 with own programs and services strengthen society and help internationalization of education and science in Slovakia. Important device for providing information about all SAIA programs has become internet. SAIA home web page has widened (www.saia.sk) and information for research workers has taken place on a mobility portal for research workers (www.eracareers.sk). SAIA also has created an information portal about National scholarship program which enable sending applications for scholarship on-line (www.stipendia.sk, www.scholarships.sk).

Main SAIA programs:

- Academic studies abroad - provide information and consultancy, organize seminars, advertise publications, organize selection procedure for educational placements, etc.
- National scholarship program - for study abroad support.
- Action Austria - Slovakia, cooperation in science and education - program is finished provisionally. Legal basis for continuing of action is planned to be in June 2009.
- CEEPUS - central European exchanging program for university studies.
- Fond NIL - for internationalization of education support.
- M.R.Štefánik Scholarship.
- Mobility centre for research workers - provides information about conditions for research workers placements, practical information about placements, organization of seminars, conferences, etc.

Except the most often performed (realized) types of study abroad we have mentioned before, placements are realized also in projects, whether international or national. **Ministry of Education** in Slovak republic provides coordinately process of selection candidates from SR for scholarship placements at United World College (high school scholarships), university teachers and research workers within the exchanging program DAAD (German Academic Exchange Service) and foreigner students, who can study in Slovak republic according to achieved scholarship from government of Slovak Republic. To other programs belong:

- Fulbright's program - its aim is to increase mutual understanding between people from USA and from other countries. Fulbright program is one of the biggest and most varied exchanging programs in the world and currently is carried out in 140 countries.
- International Visegrad Fund - The mission of the fund is to promote closer cooperation between Slovakia, Czech Republic, Hungary and Poland and strengthen mutual bonds between these countries.

- Studia Academica Slovaca - Comenius University in Bratislava, Philosophic faculty organizes summer school of Slovak language and culture Studia Academica Slovaca (SAS). The aim of this course is to achieve, if you like to deepen communicative competence in Slovak language and widen knowledge of Slovak linguistics, literature, history and culture.

4. ERASMUS AND ANALYSIS OF UNIVERSITIES REQUIREMENTS

From analysis and expert dialogues arise, that is necessary to process well mainly program Erasmus (it creates 70 percent from study abroad carried out in SR). There are currently four kind of mobility Erasmus programs - mobility of students study, mobility of students intership, mobility of teachers at university institutions and mobility - training of workers from university institutions and workers. Erasmus is part of action program of European committee LLP (Lifelong learning program) focused on university education. Its aim is to increase quality of education and support European dimension of university education through international university cooperation.

To be able to define adequate conditions about access to information about study abroad at universities through ICT, we have carried out analysis of universities needs in Slovakia. We asked particular universities to send us information which services and information they provide, which systems they use, which specification in process they assert.

Characteristic of the collection

We have analysed 20 universities, all of them joined the program Erasmus. We were not able to contact two universities of them in that time, so as an analytic sample - 100 percent - we have considered the amount of 18. We have focused priority to evaluate the state, i.e. if the item occurs or not.

Results of analysis

The aim was to find out the needs of universities and to find the requirements for students selection, as they create essential part of applicants, selection of workers is carried out usually by boss. Questionnaire contained 17 questions, some of the results are mentioned below. We do not mention the complexed evaluation because of the extension of this contribution.

Do you use any kind of ICT for administration?

All universities replied likewise - they do not use any kind of software, at all universities is used for evidence just MS excel. It results from two reasons - to create a system at university would be difficult and financial unprofitable on one hand, and using xls files comes from the requirement of national agency to deliver statistics in this form (for import to the EU system) on the other hand.

Do your superiors required from you any specific statistics?

Academicals officers require from coordinators different kind of statistics at 12 universities - mainly they are concerned in a statistic about outgoing students at that moment according to countries, if you like at the certain period of time. But only one university (STU Bratislava) keeps special record of these statistics (actual state according to countries). Other has to gain these statistics with difficulties from different sources (paper forms, xls files). The rest 6 universities have not met yet with any kind of requirement for specific statistic.

Will you be able to use system study abroad on-line?

All 18 universities respond to this question positively, so that they would really welcome the mentioned system. Four universities respond that probably they would use, but they need to have more information. Constitution that every university joined in the program Erasmus will use support ICT, is more then positive.

How many students refuse to take part in mobility after he/she was chosen?

This question is critical, as in the case, that student is already chosen and he (she) finally refused to take part, he/she does not have any responsibilities or restrictions. On the other hand significant complications emerge for school - usually is not possible to send someone else on that place. It

happens also, that school can not use these finances in other way, so they go back to the state agency and consequently back to the EU.

Discovered state is negative. There is not a university, where it has not happened, that the chosen student, because of different reasons, has not taken part in study abroad. Three universities even declared that more than a half of chosen candidates have given up the possibility to travel.

On the basis of survey carried out by us at universities (questionnaire is possible send on the request) were found these limitations and requirements for using ICT:

- Criteria for financing the placement in particular country is not exactly defined, it would be adequate to design a key for dividing finances according to the costingness of the country for Slovak republic citizens.
- Historic and actual data about outgoing students is not possible to gain by easy method, it is necessary to automatic these process, not only on the central level, but mainly on a university level.
- Student's nominations at individual universities are different, process is the same, but criterions for selection are different.
- Students are not able to choose university appropriately, frequently not a country, where they could study, because they have not got enough information about that place of staying and they choose by chance. This is why the selection of participants is sometimes noticeably unsuccessful.

5. ANALYSIS OF SOFTWARES AND EXISTING WEB APPLICATIONS

There are currently available systems in Europe, which create software support of management study abroad, if you like international cooperation. Existing software are:

- MoveOn
- Mobility-Online (Budget-Online)
- SocratesManager
- Leonardo
- LLP link
- www.stipendia.sk

LLP link serves for statistical evidence of data about study abroad in LLP programs (mainly Erasmus), if you like for coordination of financial budgets and cost statements of particular countries. They prepare an upgrade for student to be able to enrol directly. It is not known, what extant and the time period will be achieved. Stipendia.sk serves to process the process in the National scholarship program. Leonardo system finished its activity 1.1.2009, as Leonardo mobilities are from the year 2008 supplied by program Erasmus intership. There is a presumption, that Leonardo's electronic system will be used in some way also in LLP link software. Again the development is fully in EU competence, and so non of detailed information are not possible to gain. We mention other systems, as they are robust, in the next paragraph of this chapter.

MoveON

System consists of two modules MoveON - International Relations Management, MoveIn - Applications and Admissions Management. MoveOn is possible to use for management of international cooperation and study abroad. Move In is used in the applications and admissions process. Primary is dedicated for International university offices. It is an application based on database module Microsoft Access and every licence is necessary to install on users computer itself. The system is based mainly upon electronical exchanging of documents.

System is used by International offices around 300 universities with the dominance of German and French universities.

Socrates manager

Program is by technical and contextual site solved similar as MoveOn. It serves mainly for universities and it is oriented for exchanging students within Socrates program.

System is used mainly by Italian universities in number around 16.

Mobility on-line

System consists of two mutual integrated modules Mobility-online and Budget-online. Mobility-online enables to direct, administrate, evaluate all processes connected with international cooperation and mobility of teacher and students. With integrated system Budget-online enables to realize budget management and financial operations too. System operates as an internet portal, is accessible 24 hours daily. Primary is designed for National agencies, agencies which mediate exchange of students and teachers and for international university offices. There is no additional need for any other hardware or software to use this system.

Portal is used mainly in Austria by national agencies for management study abroad (Nationalagentur Sokrates, Nationalagentur Leonardo da Vinci, National agency ÖAD - Österreichischer Austauschdienst) and all Austrian universities are connected to it.

According to that non of before mentioned systems do not meet the demands found in the questionnaire for universities, is important for Slovak republic intentions to suggest a new ICT system for administration of international cooperation in education.

6. SUGGESTION OF INFORMATION SYSTEM FOR SECURING MANAGEMENT OF STUDY IN ABROAD IN SLOVAK REPUBLIC

Erasmus program is as a module of mobility portal most adequate for pilot processing, as it contains the biggest amount of monitoring data and the process is standardized - in global view (particular universities bring into this process their own individualities). Also is fully administrated at Slovak site, EU demands only certain statistical data.

Also from analysis at particular universities resulted, that particular universities do not use for administration study abroad none system, only data processor. Evidence so varied and from different sources acquired data requires databases system, which MS Excel documents do not accomplish. There is not also any connection between particular data and so receiving statistics, actual or historical, is not possible.

Frame harmonogram of the project

The aim of an on-line mobility portal is to define and to create adequate conditions for securing information needs in access information about mobility at universities through internet. It will deal with development and setting an on-line solution for administration international cooperation of educational institutions and exchanging programs. Associated aim is creating and realization of new, successful WebPages and setting a publication system for content administration. Solution will proceed in these basic phases:

- analysis of needs for portal solution study-abroad on-line,
- analysis of current state and need of University in relation to Ministry of Education SR and agencies SAIA and SAAIC,
- specifying of requirements for software and hardware securing,
- development of portal - creation of CMS, core of application and particular modules as well (Erasmus in the first year), implementation of particular requirements,
- supporting and maintaining,
- reference - increase - for the next developing (next modules and interconnections to other systems).

Users

Figure number 1 imagines block structure of proposed portal. Particular users of portal are displayed around. It is an abstract view, so particular ties among users or systems are not defined. Accurate

description of these ties comes from realization of the project and specification of the conditions from claimer and upon the proposal of informational architecture by the creator of system.

Public can utilize data, on the contrary universities, Ministry of Education SR and agencies have the authorization to enter data. Specified users are applicants - preferred group. Predominantly made by students. Applicants utilize data from portal (about study-abroad possibilities, information about universities and so on) and they enter data as well - personal details, documents needed for getting abroad and many others.

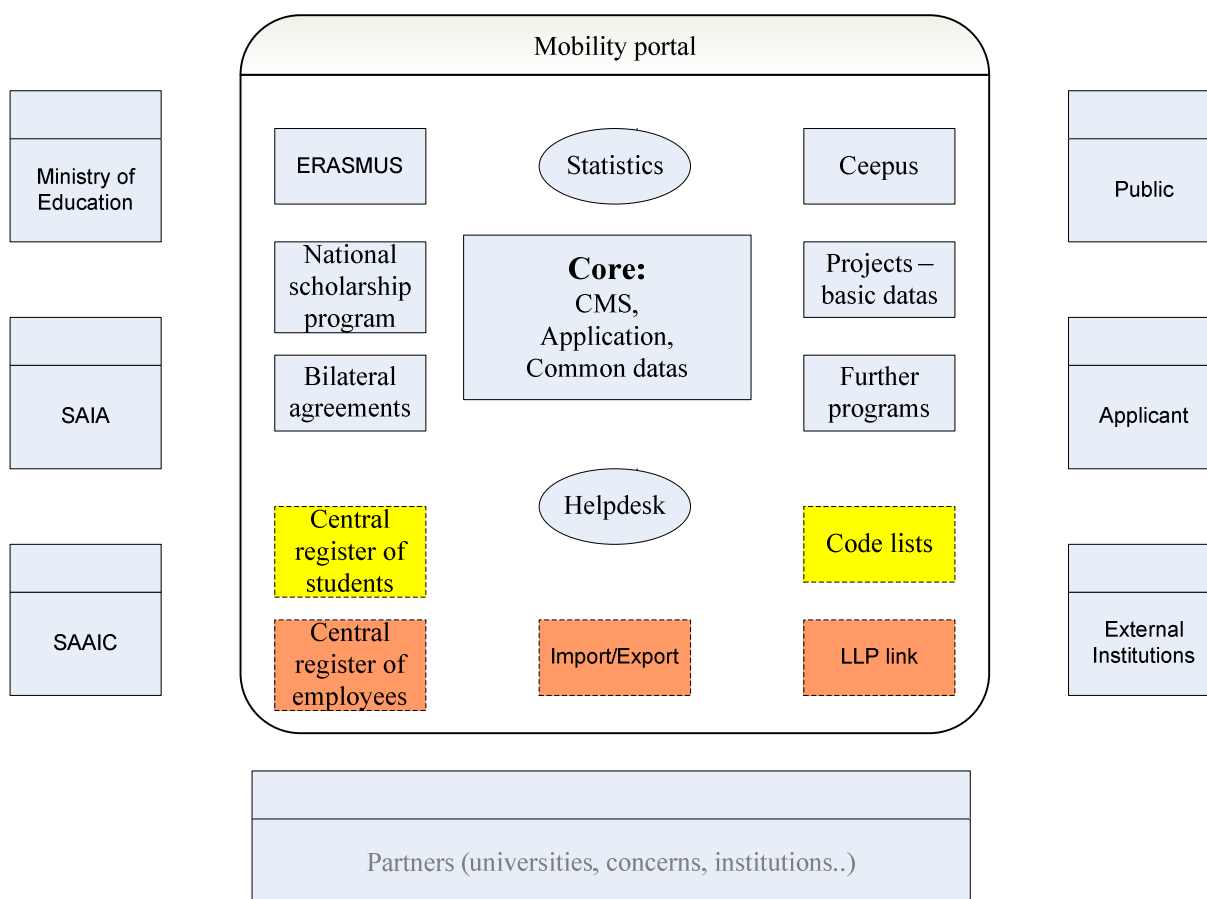


Figure 1 - Block structure of study-abroad portal

Content

The content of portal will be divided into several units - informational character for all kind of study abroad, process character for study abroad, which is possible to process on Slovak site and statistical character for study abroad, which is not possible to process in Slovakia, but is possible to keep data about them.

Particular functional blocks itemized for concrete functions, as accurate description of algorithms particular functions, or actions done by users, will be accurately specified in the realized project. Here we mentioned only basic classification of functional units with its brief description:

- **Basic functions** - basic function of portal will be to mediate given data by adequate form and adequate user. Modules, which will not be solved complex yet, will be registered with basic data about the placement (how many people and how long were on particular study abroad placement) and by complexed informational data (through CMS).
- **CMS** - important element which provide whole administration of data in databases and their intervention into application layers. Also it is concerned with providing parameterisation of particular modules without the need of programmer to intercede. It is concerned with management of various kinds of registers, statistics, users, documents, functions and content as such.

- **Core** - core of application, which provide process in particular modules. It is concerned with reporting services, monitoring the processes, exchanging data between modules and between various systems, personal details administration, setting deadlines, generation of documents, notifying service and so on.
- **Erasmus** - basic module of portal in the first year of building. Debug mistakes, find possible shortcomings. Deal with the most complexed module for study abroad used in Slovak republic. As it came from analysis, after the proposal of informational structure fulfilling requirements of Erasmus program will be another parameterisation for else modules possible by achievable process.
- **Further modules** - in the pilot year of solution is supposed that together with module Erasmus will be solved also another modules - projects in the basic version and National scholarship program, which is processed on-line nowadays, so it will be probably an interconnection of data. Not less important part will be the automatization of producing Europas mobility confirmations.

7. CONCLUSION

Mentioned facts lead to that the central standardized system with complexes information for applicants is necessary. It removes informational unsatisfaction and eliminate students, which do not have real interest in going abroad and at the same time it optimizes selection process at universities, which have with selection problem. If the situation arise, that the participant will change mind, system will warn you in time and will be possible quickly find another participant for that place. All processes will be compendious and transparent.

No one stopped upon high penetration of population with mobile phones today. It is so because, for users bring services, without which they could not imagine their life. Internet environment behave similar for those, who have the interest in new information and the speed of its acquiring. They become addicted on internet in positive meaning - they are able to carry out their duties quickly and comfortably. Man using internet services is not addicted from news in radio, television or from thousand pages of newspaper. Is stored with information, which needs and it is upon him, if the sources could find and given information correctly evaluate.

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