

AC 2010-1362: EXPERIENCES FROM AN INTERNATIONAL STUDENT AND STAFF EXCHANGE PROGRAM AND SOME STILL UNSOLVED MYSTERIES

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The special research focus of Sabina Jeschke is on cooperation of heterogeneous robots, research cooperation in virtual worlds and cooperating IT systems, in particular cloud computing. In addition to her full professorship in Aachen, she holds a co-professorship at the University of Stuttgart, targeted towards the coordination of several eResearch projects.

Sabina Jeschke received her diploma (M.Sc.) in physics at the Berlin Institute of Technology in 1997, graduating with distinction. Holding a scholarship from the German National Academic Foundation, she spent several months of research at NASA in Moffet Field, CA/USA during her studies. From 08/2000 to 05/2001, she worked as an assistant professor at GaTech (Georgia Institute of Technology, Atlanta/GA/USA) in the department of mathematics. As an assistant teacher at the department for mathematics and natural sciences at the TU Berlin, she earned her doctorate in 2004. From 01/2006 – 05/2007, Sabina Jeschke has been associate professor for “New Media in Mathematics and Natural Sciences” and director of the “Center for Multimedia in Education and Research (MuLF)” at Berlin University of Technology (2005-2007). Before joining the RWTH Aachen University 6/2009, she has been full professor for “Information Technology Services” in the department of computer science, electrical engineering and information technology of the University of Stuttgart, simultaneously acting as scientific and executive director (CEO) of the “Center of Information Technologies RUS” from 05/2007 – 05/2009.

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Olivier Pfeiffer received his M.Sc. in Mathematics at the Berlin University of Technology in 2002. His thesis in numerical mathematics investigated “Error Control using Adaptive Methods for Elliptic Control Problems in Matlab”. He has been working in several eLearning projects at the TU Berlin, beginning as a student assistant in the Mumie project - a platform using new pedagogical concepts to support teaching of mathematics for mathematicians, engineers and natural scientists - at the TU Berlin in 2001, as a research assistant at SFB609 in Dresden from 2002-2004, and is now part of the Team of the MuLF (Center for Multimedia in Education and Research) at the TU Berlin.

In the recent four years, Olivier Pfeiffer focused on the organization and coordination of the involved teams and contributed to several other eLearning and eTeaching related projects. He is also involved in the planning and application of future eResearch projects at the Berlin University of Technology and is the local coordinator at the TU Berlin of the EMECW3 project, a student and academic staff exchange programme between the EU and Lebanon, Jordan and Syria.

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Experiences from an International Student and Staff Exchange Program and some still unsolved Mysteries

Abstract

This paper describes an ongoing exchange program between 20 partner universities; eleven from the European Union and candidate countries and nine universities from Jordan, Lebanon, and Syria, where a bilateral mobility flow between the European and the neighboring countries is implemented. While the idea of this program initially intended to focus on Information and Communication Technology (ICT) subjects only, it was later opened to students from all academic fields. Nevertheless, the better part of all participating students is from engineering disciplines. The described program encompasses undergraduate, graduate, and PhD students as well as postdocs and academic staff. By broadening their technical education, we think that all participants benefit from the reevaluation of their own cultures that occurs while functioning as part of another culture and communicating in a foreign tongue. Over 100 scholarships were awarded in the first year of the program and this number was exceeded for the second year of the program, which started in September 2009. The allocation process for this year is still underway and we expect to see a similar number of scholars in this third and final phase of the program.

A part of the scholarships at the graduate and undergraduate level was granted to credit-seeking students. The rest of the graduate, undergraduate and all PhD scholarships were awarded to degree-seekers. One of the challenges that showed up was that, surprisingly for the Arab students and us, accrediting a degree obtained from some European university turns out to be much easier than getting a credit for just a single lecture attended at the very same university. The reasons for this are quite obvious: on the one hand, as a consequence of the Bologna Process, every European university today uses the European Credit Transfer and Accumulation System (ECTS) as a standard for comparing performance and achievement of students while on the other hand, all the partner countries are using the American academic system. Actually, one of them is an American university, i.e. the degrees awarded are officially registered by the Board of Education in New York State.

First experiences are reviewed, including the not exclusively academic obstacles that we had to overcome in teaching and learning within these different educational systems. We will also report on a survey, which we will conduct to learn about the students' experiences and thus assure the quality of their mobilities.

1. Overview of the Erasmus Mundus External Co-operation Window (EM ECW)

The Erasmus Mundus External Co-operation Window (EM ECW) which has become part of the regular Erasmus Mundus program in the beginning of 2009 is a co-operation and mobility scheme within the area of higher education. The EM ECW was launched by the Europe Aid Co-operation Office in 2006 and has been implemented by the Education, Audiovisual and Culture Executive Agency (EACEA) of the European Union ever since.

The aim of the EM ECW is to strengthen the ties between higher education institutions in the European Union and in third countries that are not part of the European Union. Specifically, the EACEA and EM ECW aim “to enable students to benefit linguistically, culturally and educationally from the experience of pursuing academic studies in another country, and to promote European Union (EU) values; to improve the transparency and recognition of studies and qualifications, in particular building on the ‘acquis’ and achievements gained of the Bologna process in this area; to enhance the skills and qualifications of foreign higher education staff so that they can contribute actively towards improvement of quality; to build the capacity of the administration and public and private sector by participation of their staff in higher education mobility activities (especially through doctorate and post-doctorate activities.”¹ To achieve this, student and academic staff exchanges are sponsored in order to promote the partnerships and institutional co-operation exchanges between the European and Third Country institutions.

The European Commission sponsors these partnerships with grants that partially cover the costs of the organization of mobility of higher education students and academic staff and the costs of the implementation thereof. On the European side, all 27 member states as well as the candidate countries and European Economic Area (EEA) countries are eligible to become partners in this project. Each non-EU country eligible for this project is part of a certain geographical lot which usually consists of countries which lie in close proximity to each other. The partnerships sponsored through the EM ECW need to have at least five European higher education institutions of at least three countries whereas the required number of Third Country participants differs from lot to lot. In the end, a maximum of 20 partners can be involved in each partnership. However, an unlimited number of associates can be added to the project. These associates contribute to the implementation of the mobility scheme but do not receive any funding from the EU through the project.

The mobility itself is divided into different target groups as well as different individual mobility flows: there are three target groups, i.e. scholars from the partner universities (target group one), scholars from other universities in the Third Countries (target group two) and target group three that consists of scholars in particularly vulnerable situations such as refugees, asylum seekers, or individuals with disabilities. Scholarships vary in length between one month and 34 months and are given to undergraduate, master and doctorate students as well as post-doctorates and academic staff.

The project grant consists of flat rates (€ 10.000 per partner for mobility organization costs) and unit costs to cover the individual mobilities. Scholars through EM ECW receive a monthly allowance between € 1.000 and € 2.500. The costs for travelling, health insurance and tuitions fees are also covered by the scholarship.

Whereas the first call for proposals in 2006 provided funds with a total of € 36.4 million for projects in nine geographical lots, consisting of altogether 24 Third Countries, the overall budget of projects awarded through the last call in 2008 amounts to € 163.5 million. The call for proposals in 2008 covered 21 geographical lots of more than 50 Third Countries.

2. Implementation of the EM ECW at our University

Technische Universität Berlin (TUB) has been a part of the partnership for the geographical lot of Jordan, Lebanon, and Syria since the start of the program in 2006. The calls were renewed in 2007 and 2008. Lunds Universitet is the coordinator of this project, other European partners are Masaryk University in the Czech Republic, University of Granada in Spain, Lille University of Science and Technology in France, University of Bologna and Catholic University of the Sacred Heart in Italy, Vilnius University in Lithuania, KTH (Royal Institute of Technology) in Sweden and University of Zagreb in Croatia. One of the original partners from the United Kingdom was later substituted by University of Leiden from the Netherlands. The European partners are joined by higher education institutions from the Middle East: five Jordanian universities (University of Jordan, Jordan University of Science and Technology, Princess Sumaya University for Technology, Tafila Technical University, and Hashemite University), two Syrian universities (University of Aleppo and University of Damascus) and two Lebanese universities (Lebanese University and American University of Beirut).

Table 1 illustrates the number of students as well as home countries that TUB received in the first three phases of the project. The numbers for phase 3 are tentative.

		Call 2006 (Phase 1)		Call 2007 (Phase 2)		Call 2008 (Phase 3)		Total (Phase 1, 2 & 3)	
		Scholars sent to TUB	Scholars sent to EU	Scholars sent to TUB	Scholars sent to EU	Scholars sent to TUB	Scholars sent to EU	Scholars sent to TUB	Scholars sent to EU
Jordan	Undergraduate	1	9	2	9	0	9	3	27
	Graduate	0	11	1	9	0	8	1	28
	Doctorate	6	9	1	7	1	6	8	22
	Post-Doctorate	1	5	2	5	1	7	4	17
	Academic Staff	2	4	2	5	1	5	5	14
Lebanon	Undergraduate	1	3	0	5	1	10	2	18
	Graduate	0	13	2	5	0	8	2	26
	Doctorate	0	1	0	6	0	5	0	12
	Post-Doctorate	0	0	0	1	0	1	0	2
	Academic Staff	0	2	0	6	0	2	0	10
Syria	Undergraduate	4	7	2	6	1	10	7	23
	Graduate	4	12	3	6	1	8	8	26
	Doctorate	2	5	1	5	1	5	4	15
	Post-Doctorate	0	0	1	2	0	1	1	3
	Academic Staff	0	3	0	3	0	2	0	8
Total								45	251

Table 1: Numbers of Middle Eastern scholars sent to TUB and the European partner universities for the first three phases of the EM ECW program

As this table illustrates, 18% of all mobilities have gone to TUB in the first three years of the project. When it comes to doctorate candidates, every fourth scholar has been sent to TUB. If one has in mind that TUB is just one of eleven European partners, the predominance of TUB

becomes obvious immediately. This discrepancy is more apparent in the first two phases of the project and is being corrected in phase 3 in which only seven scholars are sent to TUB.

		Call 2006 (Phase 1)		Call 2007 (Phase 2)		Call 2008 (Phase 3)		Total (Phase 1, 2 & 3)	
		Scholars from TUB to Middle East	Scholars from EU to Middle East	Scholars from TUB to Middle East	Scholars from EU to Middle East	Scholars from TUB to Middle East	Scholars from EU to Middle East	Scholars from TUB to Middle East	Scholars from EU to Middle East
Europe	Undergraduate	3	11	1	17	0	9	4	37
	Graduate	0	8	0	6	0	7	0	21
	Doctorate	0	3	0	0	0	0	0	3
	Post-Doctorate	0	2	0	0	0	1	0	3
	Academic Staff	2	2	4	7	1	3	7	12
Total								11	76

Table 2: Numbers of Middle Eastern scholars sent to TUB and the European partner universities for the first three phases of the EM ECW program

Although this partnership came into being due to an earlier cooperation between these universities in the field of ICT, the EM ECW does not focus solely on ICT but was soon opened up to all academic fields. Nevertheless, the better part of all participating students is still from computer sciences and engineering disciplines as table 3 shows. 42% of the scholars took classes or did research in one of the engineering departments at TUB.

	Computer Sciences	Engineering	Natural Sciences	Mathematics	Other	Total
Undergraduate	3	8	1	0	0	12
Graduate	4	4	1	1	1	11
Doctorate	6	2	2	0	2	12
Post- Doctorate	1	1	2	1	0	5
Academic Staff	1	4	0	0	0	5
Total	15	19	6	2	3	45

Table 3: Distribution of scholarship holders at TUB across the disciplines

The funds for the implementation of the mobility (monthly scholarships, costs for health insurance and travel grants) are transferred to the bank account of TUB where it is the responsibility of the administrative staff to disburse these payments to the respective scholars. Since these administrative tasks were adding to the usual workload of the staff at TUB, an advisor for all matters related to the EM ECW program is now in office. Through this individual, TUB provides all services that are necessary to implement the mobilities, such as issuing visa

invitation letters, enrolling the students at the university, arranging for health insurance coverage as well as travel to and from Berlin.

3. Highlights and Potential of the EM ECW

The most positive aspects of the EM ECW program are the broadening of the participating scholars' educations as well as the reevaluation of one's own culture that occurs when one is living within a different cultural surrounding than the one used to. Students from this EM ECW have an Arabic background which usually also means that they have the Muslim faith. Moving to a western central European country serves as a culture shock for many of them. Not only do they have to learn another foreign language – not all Germans speak English – but they also have to get accustomed to a different way of life. Often, they find a path of their own between the Arabic culture they are used to and the European way of life: A female Jordanian student refused to live in a mixed dorm where female and male students lived. Therefore, she moved into her own apartment which was located off-campus. This move might have taught her a lesson in independence since she would now have to depend solely on her own because she was unable to rely on other students' living close by.

Due to participation in the EM ECW program, TUB was able to strengthen its ties to the Middle East. Especially co-operations with Jordan universities have been intensified and TUB is looking forward to closely cooperate with two of the Jordanian EM ECW partner-universities on a Trans-European Mobility Scheme for University Studies (TEMPUS) project within the next year.

The challenges of the project refer to the differences between the European and Middle Eastern education system. Whereas the majority of the classes at Middle Eastern universities are taught in Arabic, a substantial numbers of classes are also offered in English. Several students who came to TUB as EM ECW scholars were surprised to find out that about 95% of the programs offered here are taught in German. Currently, there are only six master programs that do not rely on knowledge of the German language. For all others, students need to prove that they know German on a certain level; they even need to pass state-wide examinations such as the German Language Test for Universities (Deutsche Sprachprüfung für den Hochschulzugang, DSH) before they can enter degree programs. Due to this unawareness, several of the scholars attending TUB have to take language classes to improve their German skills.

According to Van Damme, “one of the most serious problems in policies and programs aimed at increasing international mobility surely is that of the recognition of study periods and credits obtained abroad. ... The lack of transparency and ‘readability’ of higher education regulations at national, but also at institutional and sometimes even faculty levels creates all kinds of problems, resulting in a widespread uncertainty among students about the recognition of a credit or the study period in the home university. ... Automatic transferability of credits among countries even with a rather similar educational system still is a dream.”²

This is exactly what we experienced at TUB: a part of the scholarships at the graduate and undergraduate level was granted to credit-seeking students who were essentially exchange students. The rest of the graduate, undergraduate and all PhD scholarships were awarded to degree-seeking students, i.e. those students who came to Berlin not to finish a degree they had

started at their home universities, but to start a completely new program. One of the challenges that appeared was that, surprisingly for the Arab students and us, accrediting a degree obtained from some European university turned out to be much easier than getting a credit for a lecture attended at the very same university. The reasons for this are quite obvious: on the one hand, as a consequence of the Bologna Process every European university today uses the ECTS (European Credit Transfer and Accumulation System) as a standard for comparing performance and achievement of students^{3,4}, while on the other hand, all the partner countries in the Middle East are using the American academic system. Actually, the American University of Beirut is an American university, i.e. the degrees awarded are officially registered by the Board of Education in New York State.

Regel claims that “because of its large, flexible, and complex academic system, because English is the main language of communication, because many of the key journals and publishers are in the U.S., and because many scholars and policy-makers have studied in the United States, the American system is a powerful attraction” which, he later admits, is not readily exportable.⁵ Same applies for the ECTS. In this case, however, the ECTS and American credit system collide and the EM ECW scholars are the ones who suffer. While the Middle Eastern countries adopted the American system for the above mentioned reasons, it complicates the EM ECW exchanges to a certain extent. More flexibility of both home and host universities in accepting credits obtained at the other institution would be really helpful for the students and the future of the program.

4. Future Developments of the Program

In late 2009 the EMECA (Education, Audiovisual & Culture Executive Agency⁶) announced changes in the Erasmus program. From 2010 on EM ECW will be part of the Action II of Erasmus Mundus program. Within this change the geographic outreach of the external cooperation will be broadened. More partner countries have been added to the recent call for proposals, e.g. the United States, Canada, and the Gulf countries and TUB is looking forward to being an active partner in Action II.

5. Conclusion

TUB has benefitted from its participation in the EM ECW program with Jordan, Lebanon, and Syria, and has been a dedicated partner from the start of the program. However, the financial aspect of the project should not be overlooked: Although the coordinating university receives € 10.000 for each participating university, less than a sixth part is actually transferred to each partner. This share is supposed to cover the administrative expenditure for the duration of this four year program. At the same time, additional costs such as language-classes are to be financed by means of this so called lump sum. In the end, each partner dedicates a lot of manpower for free which is undoubtedly alright to a certain extent but one needs to be aware of these circumstances before the start of the program and joining the partnership.

Summarizing, the positive aspects of joining any EM ECW program outbalance the negative financial aspects. Any student who is able to receive a better education or broaden his/her personal horizon due to participating in an exchange and scholarship program is a plus. In the future, though, more attention should be paid to the financing part of the mobilities as well as the

obstacles that hinder the transfer of credits between universities in different systems of higher education.

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