Alfa PUENTES

NATIONAL AND INSTITUTIONAL STRATEGIES

EUROPEAN HIGHER EDUCATION INSTITUTIONS' COLLABORATION WITH LATIN AMERICA

ALFA

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NATIONAL AND INSTITUTIONAL STRATEGIES

EUROPEAN HIGHER EDUCATION INSTITUTIONS' COLLABORATION WITH LATIN AMERICA

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CRASP – Conference of Rectors of Academic Schools in Poland
CPU – Conference of University Presidents
CRUE – Spanish Rectors' Conference
CRUP – Portuguese Rectors' Conference
EUA - European University Association
HRK – German Rectors' Conference
SGROUP - SGroup European Universities' Network

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About the Alfa PUENTES project

Building Capacity of University Associations in fostering Latin American Regional Integration

The Alfa PUENTES project (co-financed by the Alfa Programme of the European Commission, 2011-14) is an international cooperation project created to foster higher education development in Latin America. It is led by university associations from Latin America and Europe and aims at improving mechanisms to modernize, reform and harmonize education systems in Latin America and to enhance collaboration between European and Latin American universities.

Alfa PUENTES brings together six associations from Europe led by EUA, and including national associations from France (CPU), Germany (HRK), Spain (CRUE), Poland (CRASP) and Portugal (CRUP) together with partners across LA, as well as OBREAL and SGroup with partners from Latin America from Colombia (ASCUN), Ecuador (CONESUP), Chile (CRUCH), Bolivia (CEUB), Peru (ANR), Costa Rica (CONARE), Panama (CRP), Honduras (UNAH), Mexico (ANUIES and UV), Brazil (CRUB), Argentina (CIN), Paraguay (UNA), Uruguay (UDELAR), CSUCA and AUGM. Each association has a respective history of cooperation and uses the project to deepen and broaden higher education internationalisation and bi-regional dialogue.

The project aims at fostering subregional convergence processes in Latin America that are articulated by the Andean Region, the Mercosur Region and Central America/Mexico and promoting peer learning between university associations from Latin America and Europe in order to contribute to reforming quality assurance, increasing degree recognition, building a qualifications framework and enhancing academic mobility. The initiative intends to build a wider regional convergence based on subregional experience for development. At the same time, it aims at generating solid relations between European and Latin American university associations.

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Foreword

Dear Readers,

We are pleased to present to you a selection of collaboration projects and initiatives undertaken by European universities with their Latin American counterparts. The objective of this publication is to promote good practices in higher education and research collaboration, to demonstrate sustainability measures that have resulted from existing collaboration programmes, and to identify existing possibilities to strengthen relations between the regions.

Examples of diverse collaboration approaches at institutional and national levels were drawn from European partners of the Alfa PUENTES project such as the French Rectors' Conference (CPU), the German Rectors' Conference (HRK), the Spanish Rectors' Conference (CRUE), the SGroup European Universities' Network (SGroup), the Conference of Rectors of Academic Schools in Poland (CRASP) and the Council of Rectors of Portuguese Universities (CRUP), and from individual members of these umbrella organisations. The countries represented are not only based on traditional and cultural links with Latin America as it is the case of Spain and Portugal, but also range from Germany to France, each of which have strong economic focus on Latin America presently, and Poland whose links with LA in higher education have gained special interest in recent years.

The articles cover a broad range of themes like academic mobility, joint degree programmes, teaching and learning, collaboration in research or transfer of knowledge between the EU and LA. The compilation of articles can be seen as a reflection of the current trend in European higher education to incorporate Latin America into the landscape of sustainable international relations with the aim to jointly face global challenges through education and research.

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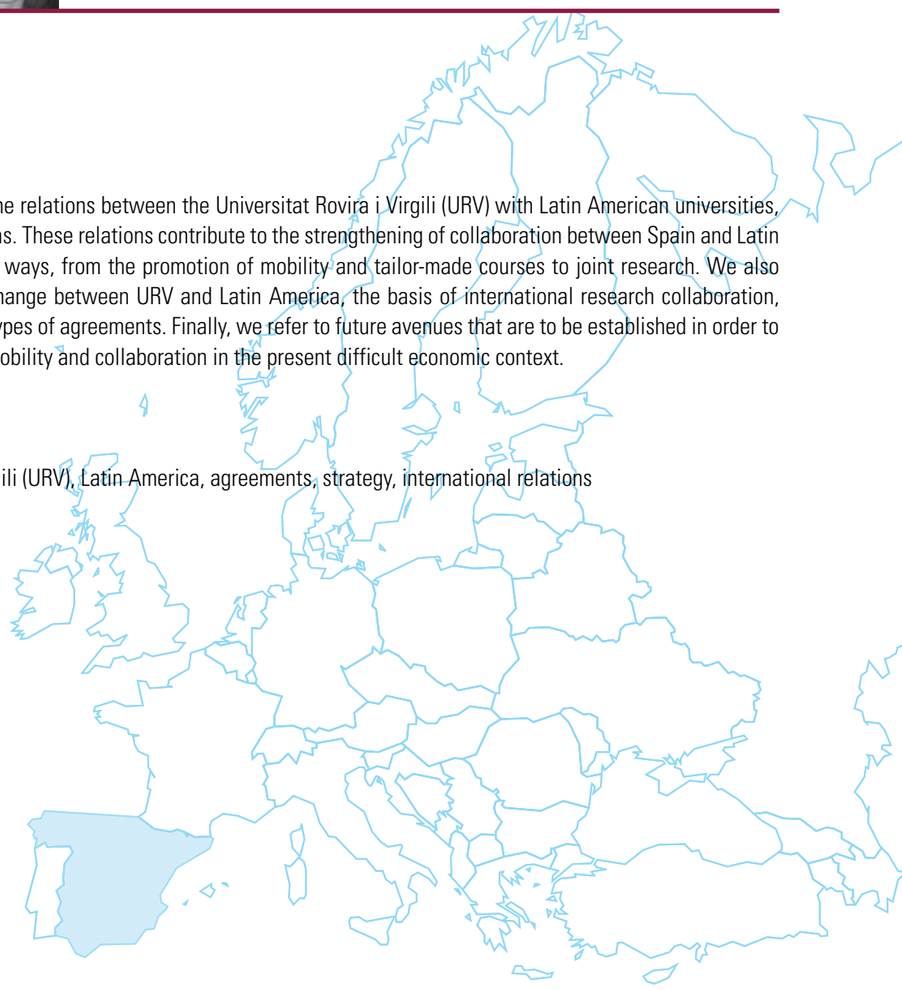
Impact of EU-LA collaboration on education and research: University Rovira i Virgili's Latin American experience, Spain

Roc Arola Arnal
Marina Casals Sala



Summary

This article describes the relations between the Universitat Rovira i Virgili (URV) with Latin American universities, agencies and institutions. These relations contribute to the strengthening of collaboration between Spain and Latin America in a variety of ways, from the promotion of mobility and tailor-made courses to joint research. We also show the flows of exchange between URV and Latin America, the basis of international research collaboration, joint publications and types of agreements. Finally, we refer to future avenues that are to be established in order to maintain the trend of mobility and collaboration in the present difficult economic context.

Keywords

Universitat Rovira i Virgili (URV), Latin America, agreements, strategy, international relations

Introduction

From the description of the different actions carried out by the Universitat Rovira i Virgili (URV), Tarragona –Spain, in the field of international relations with Latin America, the strategy of international relations between a European University and the Latin American context can be analysed and possibly replicated in those areas where it works well, and criticized thus improved in those where it does not. It is important to highlight here as well that part of this strategy is indeed an institutional strategic conscious effort led by URV's Strategic Internationalisation Plan, while another equally important part stems from the actions and willingness of our own researchers who work on joint research projects and start, in many occasions, very fruitful agreements through their research partners abroad. Maybe the latter is less structured or does not get the name of 'strategic', but it definitely constitutes the basis of many successful relations, certainly bottom-up, which greatly help the institution in its internationalisation mission. In any case, we hope that exploring URV's experience with Latin America can constitute a useful case study worth analysing and learning from, with its successes and failures.

It is not necessary to describe in length the uniqueness and special relations that Spain holds with Latin America, which derive from very close historical and identity ties, a result of many centuries of common coexistence and cultural exchanges. Currently, there are various agencies in Spain whose aim is still to strengthen the relationships among the Ibero-American countries, such as the Spanish Agency for International Cooperation Development (AECID) that, among their objectives, include the cooperation and dissemination of culture. The AECID for example, in collaboration with various government departments and agencies, organises and funds cooperation programmes within the Latin American region in order to achieve a transfer of technical knowledge and experience, which in turn should help the much needed processes of consolidating, modernising and reforming Latin American societies. Thanks to AECID's programme with Latin America, URV annually applies for scholarships that cover the housing and board of visiting researchers of this region.

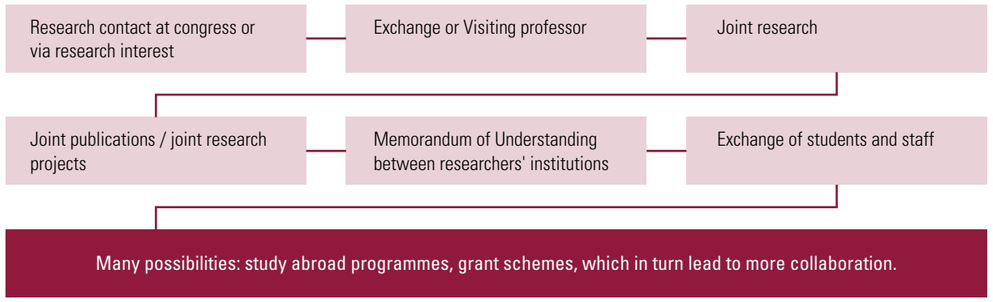
In the EU there are policy frameworks initiated decades ago and enhanced by the more recent Bologna process (with the advantage of the use of the ECTS system for credit transfer) that have led to a very important exchange flow of higher education students. Well established programmes such as Erasmus have an incredible impact in European mobility. It is a fact that with Latin America such frameworks do not exist and despite the strong cultural links, the disadvantage of using different systems, the differences in the economy and the physical distance do not favour the mobility flow.

One of the singularities that must be taken into account is that URV's official language is Catalan. Occasionally, depending on the Professor, some subjects are taught also in Spanish, which in turn constitute an important internationalisation tool. Thus, the Spanish language is also a relevant asset to be used as part of the strategy of internationalisation of our institution, along with the English language although to a lesser extent. It must be said that most Spanish universities are struggling to introduce more English classes as a means to access the international market, but this in our context is a slow process as the level of English - despite the big efforts to offer language courses to staff- is not yet sufficient to develop degree programmes entirely in English. Therefore, we have a good option to offer full degrees in Spanish, which open for us the Latin American market and has a strong impact on our internationalisation efforts.

Initially international relations of the URV did not follow a clear strategy but were rather the result of personal relationships initiated by the teaching and research staff of the university who established contact with colleagues from other institutions driven by the need to develop cooperation agreements in research and mobility agreements for their students. Once these contacts were established and an agreement was signed, they would sometimes contact the Rector's office in order to establish appropriate strategies to maintain, encourage and enhance these relationships and international agreements.

In 2008, as these contacts were on the rise, URV felt the need to develop its first strategic plan for internationalisation (approved in 2009) which was intended to set priorities and lay the groundwork for the development of international relations as well as for the better synchronization of the university's internal actions and the university's overall strategy. Obviously that having a strategic plan is not the panacea for all problems, nor should we conclude that internationalisation develops by itself, however, it certainly offers a stable framework that can then support and promote the action lines established. It also forces university management to keep a track record of the actions that they are in charge of and get in a dynamic to generate international synergies. These international synergies many times result in mobility agreements, which have an impact in the number of students that then return for a Masters or PhD degree, which obviously contribute to more joint research and finally to our participation in more international research projects. And this circle continues to turn creating more and more opportunities and exponential possibilities of growth.

An example of this could be portrait in the following scheme:



As a concrete example of this, there is an action in the strategic plan that helped create a co-financed scholarship scheme specifically for Latin America. This scheme served two purposes: the need of URV to have more and better international students at doctoral level, and then need of some Latin American universities to have more professors with a PhD degree. This scheme, half of it financed by the URV and the other half by the university of origin, had the goal to meet these two needs while at the same time avoiding the brain drain as participants of the programme would commit to going back to their university of origin after becoming Doctors. For this action to be successful, it was also crucial to establish a URV delegate for Latin America, who was in charge of the whole URV institutional strategy towards this region. It is impossible to recount the variety and number of outcomes that this scheme has resulted in, but certainly it has led to URV granting more international PhDs, to more joint publications, joint research, to visiting faculty, to more exchanges of students, to the organisation of more international seminars and conferences, to more international projects, to more in-depth links, and so on and so forth.

Other important means that URV has used to further its relations with Latin America follow. For instance, another important step in URV's relationships with this region was reached when URV signed an agreement with Banco Santander to set the 'MOU' programme ('move' in English). This programme consists of two calls: 'Latin America programme for undergraduate students – Santander' through which 10 scholarships of 3,000€ are granted each academic year for URV undergraduate students to study at a university holding an agreement with the Banco Santander. And the programme 'Santander Formula' which is endowed with a scholarship of 5000€ for an undergraduate or a master's student from the URV who obtained a placement via the MOU mobility scheme at a university holding an agreement with Banco Santander. The minimum stay of these two programmes is six months.

Similarly Banco Santander itself launches a mobility scholarships programme for young Latin American professors and researchers. Each academic year, 50 scholarships are awarded in order to help complete the training or technical and scientific specialization of the beneficiaries through stays at centres and universities in another Latin American country. The amount of the scholarship is 5000 € for a minimum stay of two months and preference is given to candidates under 35 years.

The Ibero-American University Postgraduate Association (AUIP in its Spanish acronym) also offers a scholarship programme to promote and encourage international academic mobility between partner institutions. These scholarships are aimed at professors and researchers, coordinators of Masters' and PhD programmes and graduate and doctoral students.

Another grant scheme that has proven to be extremely beneficial for URV's relations with Latin America has been the Carolina Foundation's programmes. The Carolina Foundation, founded in October 2000 as a public-private institution for the promotion of cultural relations and cooperation in education and science between Spain, the countries of the South American Community of Nations as well as other countries with special historical, cultural or geographical links, runs two calls in which URV takes part: the Training Programme and the International Visitor Programme.

To complement the Carolina Foundation scholarships, URV created an own call to enhance the participation of new international students at the master's level. These grants -1 per master's degree- cover the amount of tuition and a generous scholarship of 4,000€ (or 2,000€ for master's with blended teaching).

Also, the "Science Without Borders" scheme, a Brazilian government initiative to promote the consolidation and expansion of science, technology and innovation in the country through international exchange and mobility, has contributed substantially to URV relations with Brazil. It is a very ambitious programme which has started at the undergraduate level, but which will eventually cover doctoral and postdoctoral mobility. During the academic year 2012-13, 48 students from different parts of Brazil studied at the URV through this programme.

All these programmes and efforts are matched internally as well via the study abroad programme of the URV. This programme gives the chance to Latin American Universities to send their students to the URV to participate in a tailor-made programme of study or training. For instance, the summer of 2011 URV organised the first summer course in the field of architecture with Monterrey TEC University (Mexico). And this relationship continued to develop into maintaining the summer programme and extending into a regular semester course. This year, 2013, the programme has grown to include a summer programme in Mediterranean way of life: wine, food and health.

Outcome

As a result of institutional policies and actions, and thanks to the support programmes for both students and researchers, URV has benefited from a grown in the mobility and exchange of students and professors, in extended collaboration agreements and numerous research projects.

Here are some of the results obtained in recent years:

URV students from Latin American

Students from 15 different Latin American countries have enrolled on official URV undergraduate courses. In the last 5 academic courses Colombia is the country who has sent the most students: 111, followed by Argentina with 106 students. Panama and Paraguay, with 5 and 3 students respectively are the countries that have attracted fewer students. Here we detail the number of students per country of origin.

Table 1 - International students enrolled in URV degrees.

COUNTRY	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Argentina	11	17	23	21	17	17
Bolivia	4	7	8	9	11	10
Brazil	6	5	7	12	10	15
Colombia	9	12	19	22	24	25
Cuba	4	5	6	9	7	9
Ecuador	2	3	5	11	12	13
Honduras	2	2	2	1	1	2
Mexico	2	2	1	-	2	3
Panama	1	1	1	1	1	-
Paraguay	1	-	-	-	1	1
Peru	11	9	10	8	9	10
Dominican Republic	1	1	1	3	5	7
Uruguay	2	3	4	5	8	9
Venezuela	4	1	7	7	7	6
Chile	7	10	7	8	8	8
Total	67	78	101	117	123	135
	621					

Source: In-house table and figures compiled by the Rector's technical office, URV.

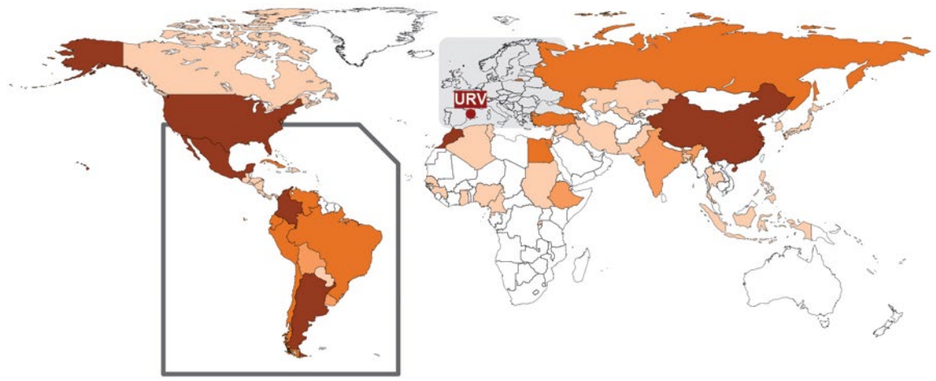
At a postgraduate level (master's and doctoral students), the countries that have contributed with more students are Colombia with 218, and Argentina with 115; and those who have sent the least are Paraguay and Puerto Rico with two students, and the Dominican Republic with 4. At the postgraduate level, the trend in enrolment is slightly receding allegedly affected by the global economic context, which has hit Southern Europe the hardest. In Southern Europe we now see that recent policies hinder economic aid and scholarship programmes weaken, which has a very direct impact on student numbers.

Table 2 - Students enrolled in URV masters' and PhD programmes

COUNTRY	2008-09	2009-10	2010-11	2011-12	2012-13*
Argentina	22	24	23	23	12
Bolivia	5	7	6	5	4
Brazil	12	10	17	11	12
Colombia	30	43	47	40	33
Costa Rica	3	4	3	3	2
Cuba	5	6	8	8	15
Ecuador	3	6	6	12	12
Guatemala	2	4	3	4	4
Honduras	1	2	1	2	1
Mexico	27	25	33	29	31
Nicaragua	-	1	1	1	2
Panama	1	1	-	2	1
Paraguay	1	-	-	-	-
Peru	8	8	10	8	10
Puerto Rico	-	1	1	-	-
Dominican Republic	1	-	-	2	1
Salvador, El	-	3	3	2	2
Uruguay	4	5	3	2	3
Venezuela	16	22	18	20	16
Chile	15	19	18	19	17
Total	156	191	201	194	180
	922				

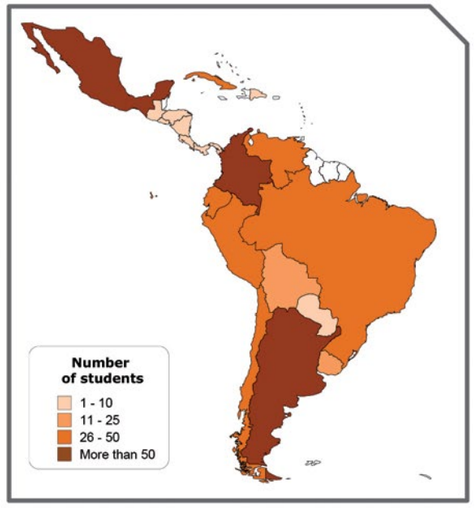
* Provisional data. Source: In-house compilation by the Rector's technical office, URV.

Map 1 - Origin of international students on official undergraduate and postgraduate courses. Academic year 2012-13



Source: In-house compilation by the Rector's technical office, URV.

Map 1.1 - Detail of Latin American students on official undergraduate and postgraduate courses. 2012-13 academic year



Source: In-house compilation by the Rector's technical office, URV.

URV students in mobility programmes

This section shows the students in mobility programmes, both incoming and outgoing. The incoming students are originally from Latin America and study at the URV for a semester or academic year and the outgoing are URV students going abroad for a similar period of time

Table 3 shows Latin American students who came to study at the URV during academic years 2009-10 to 2011-12. In 2009-10 there were 7 students from Argentina and Mexico. In 2010-11 URV received 49 students from 7 different countries, mostly from Mexico, and in 2011-12 37 students from 5 nations studied at URV.

Table 3.- Incoming students

2009-10

COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Argentina	Universidad de Ciencias Empresariales y Sociales	1
	Universidad Nacional de Rosario	1
Mexico	Universidad Michoacana de Hidalgo	3
	Instituto Tecnológico de Sonora	2
	TOTAL	7

2010-11

COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Argentina	Universidad de Buenos Aires	1
	Universidad Tecnológica Nacional	1
	Universidad de Ciencias Empresariales y Sociales	1
	Universidad Nacional de Mar del Plata	1
	Universidad Nacional de Rosario	1
Brazil	Universidade do Brasil	4
	Universidade Estadual de Campinas	1
	Universidade Regional do Noroeste do Rio Grande do Su	1
	UNIVILLE - Universidade da Região de Joinville	1
	Universidade Federal do Rio de Janeiro	1
Colombia	Universidad Nacional de Córdoba	1
	Universidad de Colombia	1
	Universidad del Atlántico	1
	Universidad Nacional de Colombia	2
	Universidad Industrial de Santander	2
	Universidad del Valle	1
	Corporación Universitaria de Ibague	1
	Universidad Pontificia Bolivariana	1
	Corporación Universitaria Tecnológica de Bolívar	1
Cuba	Universidad de La Habana	1
	Instituto Sup. Politécnico "José A. Echeverría"	2
Mexico	Universidad de México	1
	Universidad Autónoma de Aguascalientes	1
	Universidad de Colima	2
	Universidad de Guanajuato	2
	Universidad Nacional Autónoma de México	1
	Universidad Iberoamericana, A. C.	2
	I.T. y de Est. Superiores de Monterrey	9
	Universidad Autónoma de Hidalgo	1
	Universidad Autónoma Veracruzana	1
Peru	Universidad Nacional de Trujillo	1
	TOTAL	49

2011-12

COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Argentina	Universidad Nacional de Rosario	1
Brazil	Universidade do Brasil	2
	Universidade Estadual de Maringá	1
	Universidade Regional do Noroeste do Rio Grande do Su	2
	Universidade Federal da Bahía	1
Chile	Universidad Diego Portales	1
Colombia	Universidad Nacional de Colombia	1
	Universidad Industrial de Santander	1
Mexico	Universidad de México	1
	Universidad de Colima	3
	Universidad de Guanajuato	1
	I.T. y de Est. Superiores de Monterrey	22
	TOTAL	37

Source: In-house compilation by the Rector's technical office, URV.

Table 4 shows URV students going to Latin America. In 2009-10, 38 students went to 6 LA countries. In 2010-11 there were 31 students, and in 2011-12, 20 URV students studied in Latin America. These numbers include as well the students on internships.

Table 4.- Outgoing students

2009-10

COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Argentina	Universidad de Ciencias Empresariales y Sociales	4
	Internships in Argentina	2
Brazil	Internships in Brasil	1
	Universidade Federal do Rio Grande do Sul	1
Chile	Universidad del Bío-Bío	2
	Pontificia Universidad Católica de Chile	1
	Universidad de la Frontera	2
Mexico	Universidad Autónoma de Chihuahua	2
	Universidad de Colima	1
Nicaragua	Universidad Nacional Autónoma de Nicaragua	21
Uruguay	Universidad de la República	1
	TOTAL	38

2010-11

COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Brazil	Internships in Brazil	3
Chile	Universidad de la Frontera	2
Mexico	Internships in Mexico	4
	Universidad Iberoamericana, A. C.	1
Nicaragua	Universidad Nacional Autónoma de Nicaragua	20
Panama	Universidad de Panamá	1
	TOTAL	31

2011-12

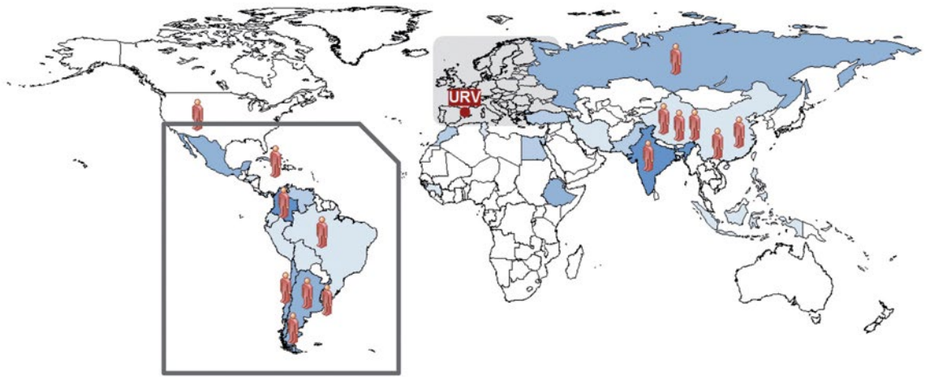
COUNTRY	UNIVERSITY OF ORIGIN	STUDENTS
Argentina	Universidad de Ciencias Empresariales y Sociales	4
	Universidad de Maiminoides	1
	Universidad Nacional de Quilmes	2
Brazil	Universidade Federal da Bahía	2
	Universidade Federal do Rio Grande do Sul	4
Mexico	Universidad de Colima	2
	Universidad Iberoamericana A.C.	1
Chile	Universidad del Bío-Bío	2
	TOTAL	20

Source: In-house compilation by the Rector's technical office, URV.

Origin of international research staff

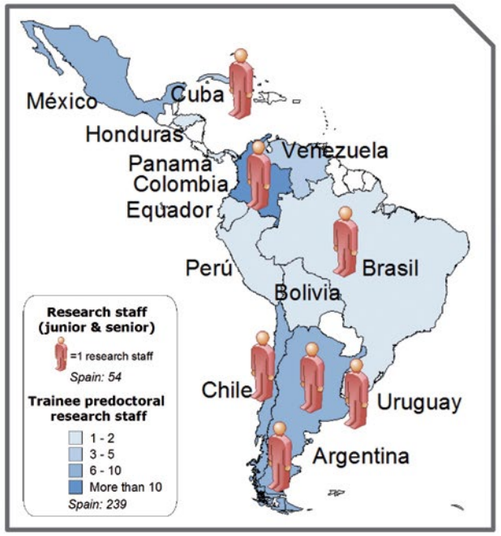
Besides students, the URV also hosts Latin American international research staff. The following maps spell out the origin of the international research staff who spend a research period at URV.

Map 2.-Origin of the international research staff. Year 2012.



Source: In-house compilation by the Rector's technical office, URV

Map 2.1.- Detail of Latin American research staff



Source: In-house compilation by the Rector's technical office, URV.

Joint publications with Latin American

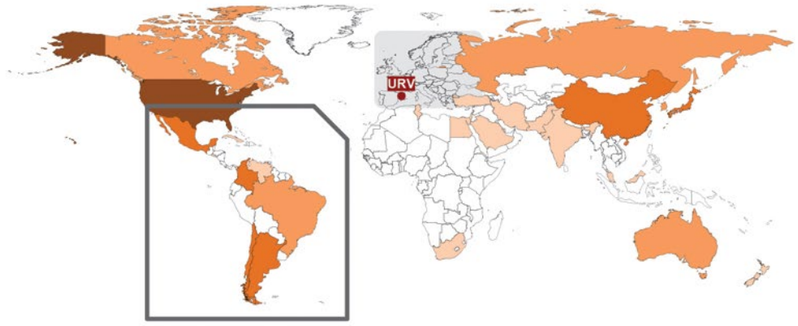
The international joint publications that our professors and researchers publish every year are clear results of the in depth international collaborations these hold both in research projects as well as via their personal relationships. As can be seen in the following table, the number of joint publications with Latin America doubled from 2009 and 2010 to 2011, reaching the present average of over 60 joint publications annually.

Table 5.-Joint publications with Latin America

COUNTRY	2009	2010	2011	2012	2013*
Argentina	1	3	6	12	13
Bolivia	-	-	-	-	1
Brazil	8	10	9	9	9
Chile	2	5	8	12	7
Colombia	6	9	14	11	8
Costa Rica	-	-	1	-	
Cuba	3	3	4	3	1
Ecuador	-	1	3	-	3
El Salvador	-	-	-	1	
Mexico	8	-	18	18	13
Panama	-	-	1	-	
Peru	1	-	-	-	2
Uruguay	-	1	-	-	3
Venezuela	-	2	2	2	1
Total	29	34	66	68	61

* Provisional data. Source: In-house compilation by Rector's technical office, URV.

Map 3.- International joint publications. Year 2012



Source: In-house compilation by the Rector's technical office, URV.

Map 3.1- Detail of Latin American joint publications. Year 2012

Source: In-house compilation by the Rector's technical office, URV.

Agreement typologies

A clear way to evaluate international relations among universities is through their agreements. Nowadays, at the URV, there are 104 specific agreements and 68 framework agreements with 14 different Latin American countries. Mexico is the country with whom we have the biggest number of agreements, 35 in total.

Table 6.- Detail of the types of agreements with Latin America

COUNTRY	SPECIFIC AGREEMENT	FRAMEWORK AGREEMENT	TOTAL
Argentina	10	19	29
Argentina / Colombia / Costa Rica / Cuba / Veneçuela / Mexico / Paraguay / Perú / Puerto Rico / Ecuador	-	10	10
Argentina / Chile	-	2	2
Bolivia	1	4	5
Brazil	7	9	16
Chile	8	8	16
Colombia	13	15	28
Costa Rica	-	1	1
Cuba	2	2	4
Ecuador	-	3	3
El Salvador	1	1	2
Mexico	18	17	35
Nicaragua	6	4	10
Peru	-	2	2
Uruguay	1	2	3
Venezuela	1	5	6
Total general	68	104	172

Future prospects

As already mentioned, the current economic context does not encourage mobility and international relations as a whole (and particularly not in Spain at the moment). However, URV's goal is to try to keep up its good results thanks, in part, to the well-established relations achieved overtime in the region.

But not only will we maintain what we have already reached over the years, but due to the great importance of this geographical area for us, URV will continue as much as possible to launch new initiatives and schemes to encourage further links and all types of collaboration.

In this sense, URV's new initiative of "International antennas" will start with Latin America. This programme's aim is to strengthen relationships at Latin American universities that wish to become one of URV so-called "International antennas". This project follows the steps of "URV's extended campus (EC)", a project that links URV with its immediate region. This strategic project is an important instrument for the university's third mission and its main aim is to become one of the driving forces of regional development, while staying committed to internationalisation. Regional and international development going hand in hand.

With URV's Strategic Internationalisation Plan "Opening doors to the world and the region", the international antennas project opens even more the scope of URV into the world. In 2014, the International Antennas project will start its implementation phase precisely in Latin America, aiming to once more further URV's already strong Latin American links.

International relations are always very much determined by the socio economic contexts and may suffer from rapid changes in the international arena. Nevertheless, URV's special relationship with Latin America, built throughout years of very close multi-faceted cooperation, seem to be on very solid grounds for an even brighter future.

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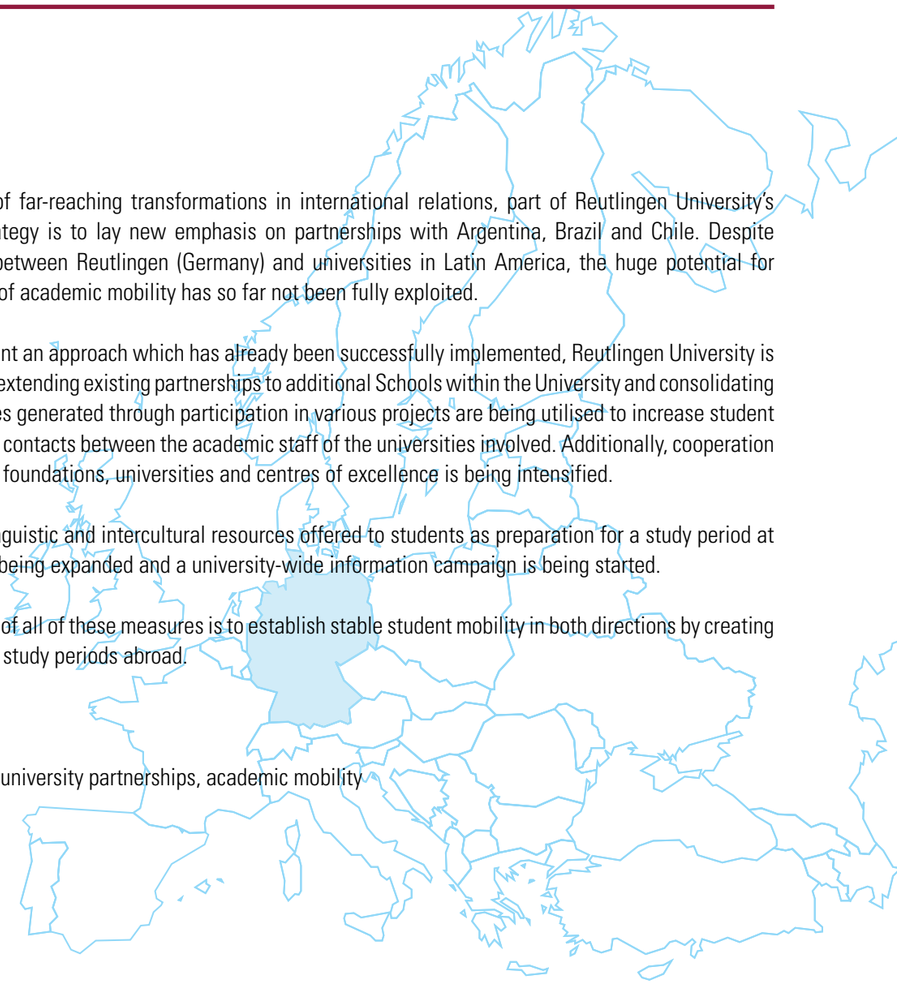
Before starting her work at the URV in 2005, Marina worked at Al Akhawayn University in Morocco for over five years, and prior to that she lived in Finland for two years. With a BA in Translation and Interpreting and an MA in the Teaching of Second Languages, together with training in NLP and Systemic Therapy, Marina has a passion for international relations, foreign languages and cultures. She is also chair of the International Relations Managers (IRM) Professional Section of the EAIE (European Association for International Education), as well as speaker and trainer at several international conferences and events. Marina was awarded the Rising Star Award by the EAIE in 2009.

Increasing academic exchange with Argentina, Brazil and Chile - as easy as ABC? An example from Reutlingen University, Germany

Claudia Frank
Max Alber



Summary

Against a background of far-reaching transformations in international relations, part of Reutlingen University's internationalisation strategy is to lay new emphasis on partnerships with Argentina, Brazil and Chile. Despite longstanding contacts between Reutlingen (Germany) and universities in Latin America, the huge potential for cooperation in the area of academic mobility has so far not been fully exploited.

Taking as its starting point an approach which has already been successfully implemented, Reutlingen University is pursuing the strategy of extending existing partnerships to additional Schools within the University and consolidating them. Financial resources generated through participation in various projects are being utilised to increase student mobility and to maintain contacts between the academic staff of the universities involved. Additionally, cooperation in a regional network of foundations, universities and centres of excellence is being intensified.

At the same time the linguistic and intercultural resources offered to students as preparation for a study period at a partner university are being expanded and a university-wide information campaign is being started.

The overriding objective of all of these measures is to establish stable student mobility in both directions by creating attractive conditions for study periods abroad.

Keywords

Argentina, Brazil, Chile, university partnerships, academic mobility

Background

Reutlingen University is a campus University of Applied Sciences in southern Germany with a total of approximately 5400 students in the Schools of Applied Chemistry, Engineering, ESB Business School, Informatics, and Textiles & Design. With more than 140 partner universities worldwide, more than 20% international students and around 600 home students spending a period abroad each year, Reutlingen was voted the International University of the year in 2010 by the Donors Association for the Promotion of Science and Humanities in Germany (Stifterverband).

The increasing globalisation and integration of the regional economy, together with the imminent demographic problem, are forcing universities in the state of Baden-Württemberg to rethink. The BRICS states are a new key area of focus in Reutlingen University's internationalisation strategy, as set out in the Structure and Development Plan (SEP) in 2012.

The main focus is on Brazil, the economic motor of Latin America. Brazil is by far Germany's most important trading partner in the region[1]. The country also offers enormous potential for German universities in the academic field, as do also Chile and Argentina. All three countries are characterised by a young population structure. The large number of German schools in Brazil and Chile is indicative of the strong bonds connecting Germany and the region. In both countries Germany enjoys an outstanding reputation as an academic location and ranks among the top five destination countries for international study periods[2].

Whilst there have been contacts between Reutlingen University and Argentina, Brazil and Chile for more than 20 years, and although partnerships have existed during this period between individual Schools and universities in the region, nonetheless the potential for developing the cooperation agreements with Latin-American countries has so far not been fully exploited – with the exception of Mexico. We therefore wish to step up the cooperation from now on, and thus increase the mobility of students and academics.

We are taking as our "guide" the cooperation with a Mexican partner university. The cooperation with the Instituto Tecnológico y de Estudios Supériores de Monterrey (ITESM) is an exemplary model of what a successful University Partnership[3] should be. It is taken up by students from all Schools at all stages of their studies for internships, study visits and double degrees, and is popular with both Mexican and German students.

Strategy and actions

In order to increase the exchange of students and academics between Reutlingen University and its partners in Argentina, Brazil and Chile and to ensure that these exchanges are sustainable and more balanced (hitherto more Incoming than Outgoing students), we are seeking to convert existing School Partnerships into University Partnerships.

A whole package of measures is needed if this strategy is to be implemented. Student exchanges will be boosted thanks to two support programmes, and we aim to achieve synergies through a number of regional networks and partnerships. These two projects and our contacts with the Brazil Centre of the state of Baden-Württemberg are explained briefly below.

[1] In 2011 bilateral trade between Brazil and Germany was worth 22.36 bn euros. Federal Foreign Office, Information on Brazil. http://www.auswaertiges-amt.de/sid_A4E1FE6D4E90B809082B5C07D0B08766/DE/Aussenpolitik/Laender/Laenderinfos/Brasilien/Wirtschaft_node.html (retrieved 17.10.2013)

[2] German Academic Exchange Service: Brazil. Information on the Education Market. https://www.daad.de/medien/daad_laenderinfos-2012_120621_brasilien.pdf (retrieved 17.10.2013); German Academic Exchange Service: Chile. Information on the Education Market.

[3] A University Partnership, in contrast to a School Partnership, is a partnership in which several Schools or Faculties of one university cooperate with the same Partner University.

The purpose of developing regional and international networks is to stabilise the partnerships. Among the factors which will contribute to realising our cooperation targets there are regular exchanges with information centres and institutions, participation in projects and conferences, along with increasing knowledge of the field and financial support - in addition to increased public awareness of our activities.

Parallel to this, internal measures such as having scholarship programmes for outgoing and incoming students will be implemented and an increase in the number of courses and workshops on offer will be used to help students prepare for a period abroad.

The scholarships, which will be financed through project funds, will serve as an incentive for students seeking to spend time in the regions mentioned and to increase student mobility numbers. In the longer term, semester-long language courses, workshops and information events will help to stimulate lasting interest in the region. Outgoing students who have spent time in the target countries will function as disseminators and pass on their experiences and information to the degree programmes involved.

All of these elements are interconnected and contribute to the strategy's success.

ABC-Latin America

ABC-Latin America is a project which forms part of the "Baden-Württemberg STIPENDIUM (scholarship) for Students – BWS plus", a programme offered by the Baden-Württemberg Stiftung (Foundation). Thanks to this project it is possible to carry out a wide variety of measures which help to implement Reutlingen University's internationalisation strategy.

Reutlingen University cooperates with the Universidad Austral in Buenos Aires, Argentina; the Universidade Federal de Ouro Preto, Brazil; and with the Pontificia Universidad Católica de Valparaíso, Chile. The aim of our project is to cooperate with these three universities not only at the level of the individual School, as has so far been the case, but to build up sustainable partnerships at University level. Students should be able to attend the partner university for exchange semesters, internships and also to write their thesis.

In the first instance the main focus of the new cooperation activities will be on the degree programmes International Business, Business Informatics, International Fashion Retail, Mechanical Engineering, International Project Engineering, Logistics and Operations Management and Applied Chemistry. This means that all five Schools in Reutlingen – Applied Chemistry, Engineering, ESB Business School, Informatics and Textiles & Design - will be involved from the start. Thanks to financial support from the Baden-Württemberg Stiftung, several scholarships can be offered each academic year for outgoing students, with the result that more students are deciding in favour of spending a semester in Argentina, Brazil or Chile.

Furthermore, representatives of the Schools and staff from the International Office are undertaking regular trips to the partner universities as part of the BWS-Plus project in order to maintain and intensify contacts. In the summer of 2013 the preparatory visit of a member of staff from the School of Engineering to the partner universities in Ouro Preto and Valparaíso, was financed out of project funds.

The project also includes regular information sessions at Reutlingen University. The Institute for Foreign Languages (IfF) has been enabled to offer two language courses in Brazilian Portuguese and a workshop on "Regional Competence Brazil". Students are keen to take up the offer of such courses as part of their preparation for their period abroad.

Ciencia sem Fronteiras (CsF)

Ciencia sem Fronteiras (Science without Borders) is a scholarship programme run by the Brazilian government to promote international exchanges. The programme's aim is to provide scholarships to support around 100,000 Brazilian students and academics from the fields of Life Sciences, Natural and Engineering Sciences in the period 2012 to 2015. The programme is equipped with a budget of 1.4 billion euros to carry out the action plan[4]. Germany is currently one of 26 target countries.

The CsF programme fulfils a complementary function to the ABC-Latin America project within the cooperation initiative with the three Latin-American partner universities, in that it supports student mobility from Brazil to Reutlingen.

Since the winter semester 2012-2013 Reutlingen University has received between two and seven scholarship holders each semester. The university profits from its participation in the CsF programme in a number of ways:
an initial selection process means that as a rule only high achieving students with appropriate subject and language qualifications are considered for a study place. When selecting applicants, Reutlingen University strives to give equal weight to ensuring on the one hand that quality standards are maintained and on the other hand to enabling as many students as possible from the partner university Universidade Federal de Ouro Preto to receive financial support from CsF funds.

Reutlingen University's student support strategy focusses on ensuring that the CsF scholarship holders can make new acquaintances and participate in joint classes with German and international students immediately after their arrival. Reutlingen University uses CsF funds to finance pre-semester intensive language courses, events and excursions, as well as a Brazilian student tutor who is available specifically as a contact person for the CsF scholarship holders. The intensive linguistic and cultural preparation of the scholarship holders makes it easier for them to integrate into student life on campus, increases the likelihood that they will be successful in their studies and consequently that close ties are formed to the host country and the host university.

Brazil Centre of the state of Baden-Württemberg

Reutlingen University is focussing on working towards closer collaboration within a local network. It is planning to work closely with the Brazil Centre, which exercises a coordinating function as the competence centre for all Universities in Baden-Württemberg, and with Tübingen University and the University of Applied Forest Sciences in Rottenburg to hold a regular exchange of information concerning best practice, to cooperate in offering language courses and excursions, and in the organisation of internships. A joint information meeting on studying in Brazil is also being planned.

Reutlingen students have profited in the past from the Brazil Centre's expertise when making organisational and linguistic preparations for a study period in Brazil, for example through advice relating to entry requirements and the visa application process.

[4] German Academic Exchange Service. Ciencia sem Fronteiras. https://www.daad.de/medien/brasilien_ciencias_sem_fronteiras.pdf (retrieved 18.10.2013)

Successes so far and challenges for the future

The two main pillars of Reutlingen University's cooperation strategy for Latin America are ABC Latin America are the BWS plus-project of the Baden-Württemberg Stiftung and the participation in the Ciencia sem Fronteiras programme. Thanks to the availability of project funding it has already been possible within a short time to give fresh impetus in a number of ways to the further development of the University Partnerships.

In the summer of 2013 a delegation of university staff travelled to Chile and Brazil; during this visit the cooperation agreement with the Pontificia Universidad Católica de Valparaíso was expanded to cover technical degree programmes and the number of places on the exchange was increased. Furthermore it was possible to confirm that the university's laboratories could be used at least in part for German students' projects. The upgrading of the agreement to the status of a University Partnership, together with Reutlingen's agreeing to accept Chilean students from technical degree programmes as soon as possible, demonstrate that both partners are prepared to fill the extended cooperation framework with life as soon as possible.

During the delegation's visit to the Universidade Federal de Ouro Preto not only were personal contacts established between the specialist professors but it was also possible to make concrete progress regarding the arrangements for the international study periods of Reutlingen University students. Thus it is possible with immediate effect to offer students from the fields of chemistry and engineering sciences projects in English. Moreover, the partner university held out the prospect of creating a limited range of English language lectures for students of Mechanical Engineering.

The availability of internship semesters and degree theses in English as well as courses in English means that the partnerships, which up till now have been restricted to students with knowledge of Portuguese or Spanish, can be opened up to new target groups.

Additionally, due to the consistently high demand for courses offering linguistic and intercultural qualifications, we expect to see a further increase in outward mobility towards Latin America in the coming semesters.
Running in parallel with the above developments, an information campaign on behalf of the International Office, which included university-wide events such as the ABC-Latin America Day and an evening event dedicated to Latin America, aims at increasing students' perceptions of the possibilities for taking part in an exchange. A moderate increase in the number of applicants, including those from subject areas which had previously not sent any students abroad, information and advice sessions with students from technical degree programmes, together with applications to work on the project as a student tutor are all indicative of growing interest in the Latin American University Partnerships. It will however only be possible in the medium term to evaluate the actual effects of many of the measures which have been started.

Outlook

The next step to be undertaken within the remaining lifetime of the BWS plus-project ABC-Latin America is to expand the cooperation agreement with the partner university in Argentina into a University Partnership. So far this School Partnership has been used exclusively by the ESB Business School. However, because of subject overlaps, our Argentinian partner university is also a suitable destination for students and academics from the Schools of Engineering and Informatics. An initiative of bw-i[5], which is offering a round table discussion on the topic of "The establishment of a German-Argentinian exchange programme in Engineering Sciences for first cycle degrees (Bachelor or Licenciatura)" in autumn 2013, illustrates the fact that cooperation with Argentina in the area of higher education is set to play a role in Baden-Württemberg in the future.

Expanding School Partnerships into University Partnerships is an important step in the direction of sustainability since all University Partnerships are centrally coordinated by RIO (Reutlingen International Office) on behalf of the University Executive, thus ensuring the continuity of the cooperation. These cooperations can be used by students and staff of several Schools and will thus utilise their capacity better. The successful partnership with our Mexican partner university shows that this works very well.

In order to ensure that partnerships continue to function in the longer term, it is necessary to continue working on and pursuing the routes which have been started. This includes in particular the development of a network of disseminators made up of professors and other staff members who function as contacts within the Schools, and of students willing to share their experiences abroad with other students, and also - in cooperation with the partners - the creation of attractive conditions for students' projects.

An additional building block for the future is the continuation of support measures beyond the lifetime of the project. In order to maintain student mobility at a stable level, Reutlingen University will seek suitable project funding and possibly extend the cooperation into the area of research. Scholarship funding from the Baden-Württemberg Stiftung (Baden-Württemberg-STIPENDIUM (scholarship) for students) and the German Academic Exchange Service (DAAD - PROMOS) will continue to be used in the future to support German students spending periods of time in the regions discussed. The new Erasmus Generation 2014 – 2020, Erasmus+, can also be used to support student mobility to and from the region.

At present it is unclear whether the Brazilian government will offer a follow-up programme to CsF with a comparable level of funding after 2015. UNIBRAL and PROBRAL, financed by German and Brazilian federal funds, are two programmes already in existence to support the bilateral exchange of students and academics[6].

[5] BADEN-WÜRTTEMBERG INTERNATIONAL, Agency for International Economic and Scientific Cooperation

[6] A precondition for financial support is a cooperation agreement between two identical degree programmes at the universities in Germany and Brazil, in which among other things the recognition of student performance and credit transfer must be regulated. The executive organisation in Germany is the DAAD, in Brazil CAPES.
https://www.daad.de/hochschulen/kooperation/20285.de.html?s=1&projektid=55711311?s=1&projektid=57046081;
https://www.daad.de/hochschulen/kooperation/20285.de.html?s=1&projektid=57046083 (retrieved 19.10.2013)

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Max Alber

Max Alber obtained his Master's degree in Political Science, Public Law and Cultural Studies from Wuerzburg University in 2012. As staff member of the International Office at Reutlingen University he is involved in coordinating the Ciencia sem Fronteiras program and the bilateral cooperation with Universidade Federal de Ouro Preto.

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Management of academic mobility between Universitat Politècnica de València and Latin American partners, Spain

Maria Boquera

Summary

This article offers an overview of the current academic exchanges between Universitat Politècnica de València (Spain) and Latin American partners, being the result of a long-lasting and fruitful collaboration of more than twenty years at all levels of studies: bachelor, master and PhD. Although thousands of students, academics and researchers have benefited from it, there is still more to be done under the next EU program Erasmus+ that hopefully will provide the right paths for its continuation. Different modalities of exchanges and projects are described and data are provided.

Keywords

Academic exchange, internationalisation, student, education, partnership

Introduction

According to the latest published statistics of the Spanish Ministry of Education, Culture and Sport (MECD)[1], the number of regular incoming students from Latin America (LA) has increased in the last years. While the number of foreign bachelor students from Europe and the North of Africa has decreased in the academic year 2011-12, there is an increase of about 1% (from 33.3 in 2010-11 to 34% in 2011-12) in regular students coming from LA. The proportion of students for Master is high but figures show a decrease from 56,2% in 2010-11 to 54,7% in 2011-12. Despite this reduction, it is still the largest area (EU 22,3%, Asia 11.1%) of foreign incoming students for master studies in Spain. For doctoral studies, from the 23,64% doctoral dissertations read in 2011-12 by students from other countries, 62% of them came from Latin America. What these figures show is that the interest in the Spanish educational system is alive for nationals coming from LA and that the circulation of people in a globalised world is becoming a reality.

In this article we would like to show the reasons for current trends in the collaboration between LA and Spain at a smaller concrete scale focusing on the particular exchanges between the Universitat Politècnica de València and its LA partners.

Historical background

The sound collaboration between the Universitat Politècnica de València (UPV) and its Latin American partners dates back to the end of the 1980s under the mandate of the rector at that time, Justo Nieto. He decided to turn the eyes of the institution to a land where, with a common language and mutual understanding, positive interaction was going to be a secure and fruitful success for both parts.

At the beginning of the 1990s it was detected that Universities in Latin America (LA) had a low collaboration with the production sector, they also had a low scientific output in comparison with the number of existing universities and their great potential. Thus, not a significant number of their staff members held a PhD and subsequently the leading capacity of research groups was low. Therefore, the UPV saw a way of transferring its expertise and know-how to train doctoral candidates who would supervise other PhD candidates in a near future, thus creating the circulation of knowledge transfer. The development of consolidated research groups and the training of future doctors was a field to work together hand in hand, first by mobilising academic staff and then students and researchers. Moreover, academic exchanges for one semester or the whole academic year, as a previous step for other kinds of mobility such as intensive short courses or summer schools were also taken into account. This ambitious project needed of course some investment of time and resources and it is still being developed.

At the time, this interest led to the implementation of UPV coordination or in-place offices and collaboration structures in the areas of greatest activity: Colombia, Uruguay and Argentina, México and Cuba. At present, when needs have changed and the collaboration is settled, there is only one UPV office in Bogotá and the collaboration in the Centro Politécnico del Cono Sur in Colonia de Sacramento (Uruguay) managed by the Universidad de la Empresa.

[1] http://www.mecd.gob.es/dms/mecd/educacion-mecd/areas-educacion/universidades/estadisticas-informes/estadisticas-informes-documentum/datos-cifras/2012-2013-datos-y-cifras-sistema-universitario-espanol.pdf

Actions, programmes and projects

LA universities have been very open to international cooperation with UPV in teaching and research. However, the funding of such activities has not been always an easy task together with the great socioeconomic differences between the eighteen different Hispano-American nations conforming LA together with structural, organisational and functional differences in tertiary education.

UPV long-lasting action strategy in a global working project was consolidated in the 2000s with the Rector Juan Juliá and has ben operation to the present day with the Rector Francisco Mora. Different actions being developed and considered as an overall institutional strategy with positive outcomes are listed below:

a) Agreements between LA and Spanish **Ministries of Education** to fund grants and start collaborative educational programmes. In 2005 after the Salamanca summit of Heads of State and Government, and in the XVI Ibero-American Conference of Education in Montevideo (Uruguay), in July 2006, the document establishing the initiative known as Ibero-American Area of Knowledge (Espacio Iberoamericano del Conocimiento) was devised. It aimed at the transformation of higher education regarding research, development and innovation focusing on quality and accessibility to goods and services by increasing international competitiveness. Its objectives were to strengthen the national and regional accreditation and evaluation systems in higher education, mobility and knowledge transfer and opened a path for a smooth collaboration.

   Regarding specific academic exchanges at governmental level (LA-Spain) three of the most recent projects (2012 and 2013) are:

   - for Bachelor studies, the programme "*Ciencia sin Fronteras*" with the Brazilian Government (Centro Nacional de Pesquisas, Brazilian Ministry of Education);
   - for Master and Doctorate students, the agreement with the Ministry of Higher Education, Science and Technology (MESCYT) of Dominican Republic;
   - the programme PRONABEC, with the Education Ministry of Peru, also for Master studies and Doctorate.

   Since the first two projects began two years ago, more than 60 students under each project come to UPV to study. The last one has started this academic year.

b) **Academic mobility of students** is a complex process in itself that implies a fluid communication, mutual trust and a close follow-up. Internationalisation units work under strict deadlines following the commitments of service charters for quality and paying attention to all the details (differences in academic calendars, visa procedures, information dissemination, etc.). The selection of proficient students able to follow academic standards at both sides of the Atlantic and the recognition of the studies upon returning are key issues for a successful academic exchange.

For the outgoing students to LA, UPV has its own funded programme called PROMOE (*Programa de Movilidad de Estudiantes*). By means of institutional frame and exchange agreements, students can spend one or two semesters (four to ten months) at a partner university without paying tuition fees and there is a lump sum grant to cover expenses. There are grants from private institutions (mostly banks) for the same purpose. Students need good academic records and pass a selection process where they are evaluated with regard to academic and personal competences to ensure a successful integration in a different culture and learning environment.

UPV mobility figures (see ANNEX 1 below) show that there is an imbalance between incoming and outgoing students, which follows the trend shown in the MECD statistics mentioned above: more incoming and outgoing. The countries that send more students to UPV are Colombia and Mexico and UPV sends more students to Peru than it receives. Argentina, Brazil and Mexico have the most similar higher education systems to the Spanish one. Together they concentrate 55% of the LA degree and master students and have the greater number of universities, followed by Chile and Panama[2]. This is the reason why UPV concentrates most of its student exchanges under collaboration agreements with these countries.

Little by little, more LA universities are present in international rankings. The best positioned LA Universities in rankings are Universidad de Buenos Aires, Universidad de São Paulo, Universidad Federal de Río de Janeiro and Universidad Estatal de Campinas in Brazil, Universidad Nacional Autónoma de México, Pontificia Universidad Católica de Chile and Universidad de Chile. As the tables in Annex 2 below show, UPV has agreements with all of them, thus ensuring and developing a mutual and positive interaction as well as with other universities of high academic reputation such as: Instituto Politécnico Nacional, Tecnológico de Monterrey, Universidad de Guadalajara (México); Universidad Tecnológica Nacional, Universidad de La Plata (Argentina); Universidad Federal de Minas Gerais (Brasil); Universidad de Concepción, Universidad de Santiago de Chile (Chile); Universidad Nacional, Universidad de Antioquia, Universidad de Los Andes (Colombia), Universidad de La Habana (Cuba), Universidad de Puerto Rico, Universidad de Costa Rica, Universidad Federal de Río Grande do Sul and many more.

These academic exchange experiences provide students with versatile profiles, specialisation and capacity for team-work. They learn to work in multicultural environments with an increased creativity, flexibility and ability in decision taking.

c) **Mobility of academia**. For short tuition periods in LA (and other non-European countries), UPV has the own funded with self-funded programme APICID (). It supports up to two week teaching stays in prestigious higher education institutions. Academics can also come to UPV for teaching purposes in regular programmes. Tuition at masters' level (UPV own programmes, shared programmes and regular programmes) is the most common among UPV academics. Universities of Argentina, Brazil, Chile, Cuba, Mexico and Peru are the most demanded under this programme.

d) **Continuing education** leading to the acquisition of UPV's own titles. The implementation of **non-formal types of teaching and learning** such as: online or distant learning or blended learning has increased teaching and learning capacities from overseas students interested in acquiring different competences. UPV belongs to RECLA (Red de Educación Continua de Latinoamérica y Europa) with 56 universities in different LA and European countries. It aims to contribute to the creation and design of lifelong learning academic programmes. The Centro de Formación Permanente of UPV offers more than 100 own masters, own diplomas and specialisation courses many of them open to LA graduates.

[2] http://es.wikipedia.org/wiki/Am%C3%A9rica_Latina

e) The common participation in **funded projects** (from EU or other sources) provides funding for the mobility of researchers, academics and students (graduate and undergraduate). Without being exhaustive and focusing on the most recent examples could underline the most successful ones:

- ERASMUS MUNDUS projects[3] with LA as coordinators such as: COOPEN (Colombia, Costa Rica and Panamá with 12 LA Universities and 8 European Universities plus 25 associate members), EUROTANGO I and II, and as partners: Euro-Brazilian Window I and II, Mundus 17, ARBOPEUE, BABEL, ARCOIRIS and MUNDUS LINDO.

- ALFA and ALFA III projects such as INFOACES (Sistema de Información sobre las Instituciones de Educación Superior de América Latina para el Área Común de Educación Superior con Europa), CESAR (Contribución de la Educación Superior de América Latina a las Relaciones con el Entorno Socioeconómico) and ALFA PROFLEX.

- TEMPUS project: ACRO (Acreditación y Reconocimientos Oficiales) between Mercosur and European Universities.

Through university consortia such as the SGroup European Universities Network, UPV participates in the Alfa PUENTES Project - Building Capacity of University Associations in fostering Latin American regional integration and the Inter-Continental Academic Exchange Programme (ICon).

f) **Cultural activities** are also a way of collaboration in internationalisation which takes place on campus as the presence of LA students at UPV is active. For example, the Vice-Rectorate of Students and the Fine Arts Faculty promote the Festival Polinizia always with the participation of LA students. Its 2008 edition was specially devoted to them as well as several activities during the yearly International Exchange Week (for example the Day of America Latina at the III Semana Internacional de Intercambio or the international food fair for UPV's 40th aniversary).

Some results

The results obtained have been very positive for both parts. Without giving an exhaustive list, it is interesting to mention that in the last five years, 271 Spanish students went to LA to study for one or two semesters and UPV received 1275 students in the same period under bilateral exchange agreements. Due to the present economic cycle in Spain, many students that went on an exchange to LA decided to continue their stay after graduation and begin their professional life there. New ways of collaboration such as practical placements are being developed.

In the period 2005-2012, 271 LA students (66 from Mexico, 48 from Argentina, 15 from Colombia, etc.) finished in UPV their "Diploma de Estudios Avanzados", the previous stage for doctorate.

[3] Detailed info and exchange numbers at: http://www.upv.es/entidades/OAI/info/728659normalc.html

With a change of regulation, in the period 2005-2010, 72 PhD's from LA students were successfully completed in UPV. In the last academic year 2012, 12 students from LA accomplished their PhD successfully (6 of them from Colombia). In Spain there have been different regulations for PhD programmes and today we have doctoral schools.

46 postgraduate programmes with Argentina, Bolivia, Chile, Colombia, Cuba, Ecuador, México, Peru, Dominican Republic, Uruguay and Venezuela are still in operation today in different fields of knowledge ranging from agronomy to telecommunications or industrial design among others[4].

Conclusions and a look ahead

All the strategies contributing to academic collaboration and mobility mentioned in these pages: agreements at different levels, academic mobility, continuing education, projects and activities are key for brain circulation and for the internationalisation of higher education institutions.

There are going to be many collaboration possibilities through the new programme of the EU, Erasmus+, where consortia of universities and networks are going to play a key role in its three key actions. Ongoing working groups of university networks such as the SGroup European Universities, Magalhaes or Conahec (just to name some where UPV takes an active part with LA partners) will provide well established paths of collaboration in education. The internationalisation of higher education in Spain is key in the University Strategy 2015 and the Iberoamerican Space of Knowledge is going to be fundamental. Joint degrees, dual degrees, and double and joint masters and doctorates will be specially relevant and easier to implement by means of the use of the new technologies. Nevertheless, bureaucracy and own legislation barriers have to be diminished.

Many LA and UPV graduates still have contacts with their former supervisors, professors and fellow students thanks to the alumni associations and social or professional networks, and these contacts increase the internationalisation value on both sides.

Moreover, UPV is encouraging this professional links between international actors, sharing expertise through consultancy in specialised matters or providing support for the implementation of new companies by young entrepreneurs through business incubators.

[4] Detailed information on projects and programmes can be found at: http://www.upv.es/entidades/OAI/menu_urlc.html?http://www.upv.es/entidades/OAI/info/U0602537.pdf

Annex 1

Facts and figures on academic mobility (Direct agreements only)

A. Students **sent** to LA by UPV under direct academic exchange agreements (not under projects or other types of mobility) by academic year and country.

COUNTRY	2008	2009	2010	2011	2012	TOTAL
Argentina	15	15	11	9	7	57
Brazil	11	6	7	11	12	47
Chile	10	11	9	6	6	42
Colombia	0	1	5	0	0	6
Costa Rica	4	6	6	1	2	19
Cuba	2	3	1	0	4	10
Ecuador	1	0	0	4	0	5
Mexico	29	11	8	5	2	64
Panama	0	0	3	0	0	3
Peru	3	1	2	3	3	12
Dominican Republic	1	0	1	1	0	3
Uruguay	2	0	0	0	1	3
Total	78	54	53	46	40	271

B. Students **received** in UPV from LA by academic year and country.

COUNTRY	2008	2009	2010	2011	2012	TOTAL
Argentina	25	26	29	19	16	115
Bolivia	2	0	4	2	0	8
Brazil	55	50	32	39	79	255
Chile	17	31	40	32	16	136
Colombia	53	48	47	18	22	188
Costa Rica	0	2	5	3	0	10
Ecuador	0	1	0	0	0	1
Guatemala	0	0	8	0	1	1
Honduras	0	0	0	0	1	1
Mexico	129	116	116	97	50	508
Panama	0	0	5	0	0	5
Paraguay	0	2	0	0	0	2
Peru	1	1	4	0	2	8
Rep. Dominicana	4	1	1	0	0	6
Uruguay	4	10	8	3	3	28
Paraguay	1	0	0	2	0	3
Total	291	288	291	215	190	1275

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Author

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Maria Boquera holds a degree in English and German Philology from the University of Valencia (UV) (Spain), a Masters Degree in Translation from the Universidad Complutense of Madrid and PhD in Philology with honours (2005) from UV. At present, she is an Associate Professor of the Applied Linguistics Department of the Universitat Politécnica de València (UPV), reading Technical English at the School of Civil Engineering (since 1995). She has also worked as a Spanish Language Foreign Assistant in the UK and as stagier and Auxiliary Translator (English / German) for the Spanish Division of Translation at the Secretariat of the European Parliament in Luxemburg.

She has held the posts of Vice-Dean of International Relations of the School of Civil Engineering (September 2005 until July 2008) and Deputy-Director of Research of the Applied Linguistics Department until April 2009. Since then and up to the present day, she is the Director of International Academic Exchanges of the University, coordinating the International Relations Offices of the 13 UPV Schools or Faculties, as well as directing the International Central Exchange Programmes Office.

Organisation of academic mobility in the field of engineering, technology and science between AGH University of Science and Technology in Cracow and Latin American partners, Poland

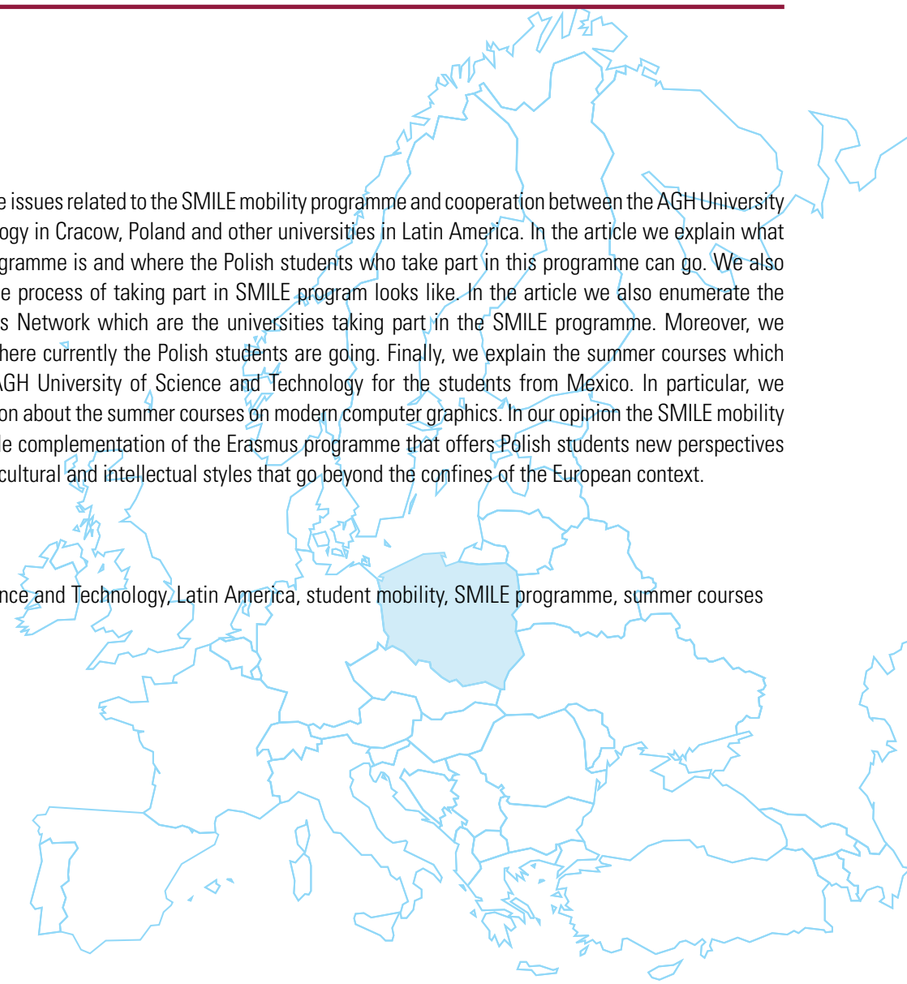
Mirosław Gajer

Summary

The article discusses the issues related to the SMILE mobility programme and cooperation between the AGH University of Science and Technology in Cracow, Poland and other universities in Latin America. In the article we explain what the SMILE mobility programme is and where the Polish students who take part in this programme can go. We also describe how the whole process of taking part in SMILE program looks like. In the article we also enumerate the members of Magalhães Network which are the universities taking part in the SMILE programme. Moreover, we give the information where currently the Polish students are going. Finally, we explain the summer courses which are organised at the AGH University of Science and Technology for the students from Mexico. In particular, we present some information about the summer courses on modern computer graphics. In our opinion the SMILE mobility programme is a valuable complementation of the Erasmus programme that offers Polish students new perspectives on different academic, cultural and intellectual styles that go beyond the confines of the European context.

Key words

AGH University of Science and Technology, Latin America, student mobility, SMILE programme, summer courses



Introduction

The scope of the paper is about cooperation between the AGH University of Science and Technology in Cracow and other universities in Latin America. The AGH University of Science and Technology in Cracow is one of the oldest technical universities in Poland and it was established in 1913. Currently the AGH University of Science and Technology takes part in the SMILE mobility programme which allows Polish students to go to other universities in such countries of Latin America as Argentina, Brazil, Chile, Colombia, Dominican Republic, Mexico, Panama, Peru, and Venezuela. The AGH University of Science and Technology also organises summer courses for the students from Mexico.

The SMILE mobility programme

In this section we explain what the mobility programme SMILE really is, where the students can go and how the whole process of student mobility in Latin America, Caribbean and Europe looks like.

What is the SMILE programme?

The student SMILE mobility programme is the Erasmus-like programme intended for a student exchange. The full name of the project for student mobility in Latin America, Caribbean and Europe is Magalhães Network SMILE project. The project is addressed to the students of engineering, technology, and science. The programme is intended for students who graduated the second year of their studies. The SMILE programme is planned as one semester exchange.

Where can the Polish students go?

The students for whom the SMILE programme is addressed can go to the following universities:

- Chile – Universidad Técnica Federico Santa Maria in Valparaiso
- Colombia – Universidad de los Andes in Bogota
- Colombia – Pontificia Universidad Javeriana in Bogota
- Dominican Republic – Pontificia Universidad Católica Madre y Maestra in Santo Domingo
- Mexico – Instituto Politécnico Nacional in Mexico
- Peru – Pontificia Universidad Católica in Lima
- Venezuela – Universidad Simon Bolivar in Caracas

2.3. Process for taking part in the SMILE programme

At the very beginning the student must make a choice of the university to which he or she wants to go. The list of the universities which the student may choose is given above (point 2.2). Then the student must set the duration of the exchange. It is important that the head of students' department or the dean of the students' faculty agrees on the travel arrangements. At this stage the Letter of Acceptance is obtained by the student. In the next step the Learning Agreement between the home university, the student, and the host university is signed. And, the last but not least, the Application Form is finally filled in by a student. Having accomplished all these points the student is allowed to go to the university of their choice.

What are the members of Magalhães Network?

The members of Magalhães Network are the following universities from Latin American countries:

- Argentina (Instituto Tecnológico de Buenos Aires),
- Brazil (Universidade Estadual de Campinas, Brazil Universidade de São Paulo, Universidade Federal do Rio de Janeiro),
- Chile (Brazil Pontifícia Universidad Católica de Chile, Universidad de Chile, Universidad Técnica Federico Santa María),
- Colombia (Universidad de los Andes, Pontificia Universidad Javeriana),
- Dominican Republic (Pontificia Universidad Católica Madre y Maestra),
- Mexico (Instituto Politécnico Nacional, Universidad Nacional Autónoma de México),
- Panama (Universidad Tecnológica de Panamá),
- Peru (Pontificia Universidad Católica del Peru),
- Venezuela (Universidad Simón Bolívar).

The European members of the Magalhães Network are as follows:

- Belgium (Université Catholique de Louvain),
- Czech Republic (Czech Technical University),
- Finland (Aalto University),
- France (École Centrale de Nantes, Institut National Polytechnique de Grenoble, Paris Tech),
- Germany (Technische Universität München, Universität Stuttgart),
- Italy (Politecnico di Milano, Politécnico di Torino),
- Poland (AGH University of Science and Technology),
- Portugal (Instituto Superior Técnico – Universidade Técnica de Lisboa, Universidade do Porto),
- Spain (Universitat Politècnica de Catalunya, Universidad Politécnica de Madrid, Universidad Politécnica de Valencia),
- Sweden (Lunds University, KTH Royal Institute of Technology).

As one can see that for some countries there is more than one university engaged in the student SMILE mobility programme. Moreover, it is important to mention that the AGH University of Science and Technology is up till now the only Polish university which takes part in the programme.

Where can Polish students go?

Up till now the students of the AGH University of Science and Technology are going or are planning to go to the following countries of Latin America:

- Colombia (Universidad de los Andes in Bogota, years 2013 – 2015, 2 students for 6 months, the people in charge are: Dr inż. Mirosław Gajer and Prof. Alain Gauthier Selleir),
- Colombia (Pontifícia Universidad Javeriana in Bogota, years 2010 – 2015, 2 students for 6 months, the people in charge are: Prof. Zdzisław Papir and Prof. Luis David Prieto),
- Mexico (Instituto Politécnico Nacional in Mexico City, years 2013 – 2015, 4 students for 12 months, the people in charge are: Dr inż. Mirosław Gajer and Dr Enrique Durán Páramo),
- Republica Dominicana (Pontificia Universidad Católica Madre y Maestra in Santo Domingo, years 2013 – 2015, 4 students for 12 months, the people in charge are: Dr inż. Mirosław Gajer and Ing. Pedro Taveras Nunez),
- Peru (Ponticicia Universidad Catolica de Peru in Lima, years 2010 – 2015, 2 students for 6 months, the people in charge are: Prof. Zdzisław Papir and Luis Peirano Falconí),
- Venezuela (Universidad Simon Bolívar in Caracas, years 2011 – 2014, 2 students for 6 months, the people in charge are: Prof. Zdzisław Papir and Héctor Maldonado Lira),
- Chile (Universidad Técnica Federico Santa Maria in Valparaiso, years 2013 – 2015, the people in charge are: Dr inż. Mirosław Gajer and Karol Trautmann Thomas).

Summer courses at the AGH University of Science and Technology

Apart from the SMILE mobility programme the AGH University of Science and Technology organises summer courses for students from Mexico on an annual basis. These courses have been already organised for sixteen years. The main organiser and coordinator of these summer courses is Dr inż. Czesław Grzbiela from the Department of Electrical Engineering of the AGH University of Science and Technology.

Currently the AGH University of Science and Technology offers summer courses in the following disciplines:

- Manufacturing integrated systems,
- Measuring and control of mechanical integrated systems,
- International negotiations,
- Modern Computer Graphics,
- Ethics Fundamentals.

Summer courses on modern computer graphics

The author of this paper together with Prof. Tadeusz Szuba from the Department of Applied Computer Science of the AGH University of Science and Technology was teaching modern computer graphics at the 16th Summer Course in 2013. In these summer courses three Mexican students from Instituto Tecnológico y de Estudios Superiores de Monterrey took part.

During the summer courses the Mexican students were taught three dimensional computer graphics and of techniques of modeling, animation, simulation, and rendering. During the courses the Mexican students used the professional graphical application Softimage Autodesk. Special attention was paid to the issues of visual programming with the use of ICE (Interactive Creative Environment) in Softimage programme. Thanks to the potential of Interactive Creative Environment it is possible to simulate and visualize many classes of physical phenomena (rigid bodies, soft bodies, cloths, particles) and make realistic animated three dimensional computer graphics.

Apart from the core subjects mentioned above, the students had an opportunity to participate in a cultural programme which enabled them to get a taste of Europe, with a focus on Poland and its neighbours.

Final conclusions

Within the framework of the SMILE programme students from the AGH University of Science and Technology and participating Universities from Latin America have an opportunity not only to learn and exchange ideas related to their core subjects but also to be immersed in a new cultural setting. The programme is a valuable complementation of the Erasmus programme, offering Polish students new perspectives on different academic, cultural and intellectual styles that go beyond the scope of the European context.

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Author

Mirosław Gajer

Dr inż. Mirosław Gajer was born on the 25 of April 1971 in Cracow. He graduated from the faculty of Electrical Engineering at the AGH University of Science and Technology in 1996. He obtained his PhD. in the discipline of computer science in the year 2000. Currently he works at the Department of Applied Computer Science of the AGH University of Science and Technology. The area of his research interest is mainly artificial intelligence, especially natural language processing, computational linguistics, and evolutionary systems.

Strategies towards organising academic mobility: international student exchange at Wroclaw University of Technology, Poland

Jan Kwiatkowski

Summary

Wroclaw University of Technology (WrUT) is an autonomous technological university and an academic research institution. One of general rules followed by Wroclaw University of Technology is acting towards the creation of a global, educational & research platform. Understanding that comprehensive education of its graduates will not be possible without cooperation between universities in Poland and abroad. Therefore, Wrocław University of Technology participates in a number of teaching and research programmes of the European Union, it also has bilateral agreements with universities all over the world, with 600 in total. One of the aspects influencing smooth international cooperation is equal geographical distribution of bilateral agreements, hence our special interest in achieving it. At present cooperation with South and Latin America is one of the main priorities of the university. By participating in world-wide exchange programmes we expect to find solutions that will help us to improve our education processes by modification of existing learning programmes. Moreover, working together on the necessary changes we would like to strengthen the role not only of our university but also the role of other institutions, which will tighten our cooperation in the future.

Key words

Poland, Latin America, innovation, research cooperation, international education, training, academic mobility

Introduction

Wrocław University of Technology (WrUT) was founded to serve its city and region, including especially business – small and large Polish and foreign companies, because their innovation depends on economic development in our region, and WrUT should play a leading role in the transfer of knowledge to those businesses. The goals of WrUT are: identification of priority and creation of new lines of research at WrUT oriented to the development of the region, country and beyond . WrUT also has civilisational obligations related to the society that can be fulfilled by the extension of international cooperation in research, intensification of research activity, commercialization of research results by strengthening collaboration with the market and other stakeholders, integrating of environmental research and industrial development. Also the cooperation with important economic partners, identification and continuous monitoring of the main purposes of research and technological areas are placed high on WrUT's priority list with regards to the region of the Lower Silesia, but also in the national and international context.

Wrocław University of Technology is an autonomous technical university and an academic research institution. Its mission it to form creative, critical and tolerant personalities of students and post-graduate students and to lay development directions of science and technology. The university executes its mission through the following activities: creativity innovation, highest standards in research production, knowledge transfer, and high quality of education, and freedom of criticism with respect for the law. Wrocław University of Technology as an inclusive academic community fosters academic values and traditions and broad cooperation with different universities. It strives for a prominent place amongst the European universities and worldwide

One of the main strategic goals of Wroclaw University of Technology is to create a broad range of professional education opportunities at the level of graduate studies and other forms of training, corresponding to social and especially the labour market's needs. International cooperation including student exchange is an essential tool to receive this goal. Increasing the level of research and innovation, expressed by the position of the university in the communities of knowledge and innovation is very important for WrUT, it can be accomplished by putting all the efforts in improving teaching programmes available at the university.

There are a lot of cooperation agreements between Wroclaw University of Technology and different companies located in Wrocław and the region of Lower Silesia (IBM, Volvo, Google, etc.), programmes of study are often adjusted to their needs, these are the so called in-company courses. There are also agreements with regional authorities. In addition to this the university offers double and jointly awarded diploma programmes as well as joint PhD projects.

All of the above mentioned fact makes smooth international cooperation related to education one of the strategic goals of Wroclaw University of Technology.

International cooperation

One of general rules followed by Wroclaw University of Technology is acting towards the creation of a global educational & research platform, understanding that comprehensive education of its graduates will not be possible without cooperation between universities in Poland and abroad. All courses are run in accordance with the principles formulated in the Magna Charta Universitatum. Our university intends to develop better and more profound cooperation with international partner universities; share expertise and experience with other HEIs institutions committed to the mission of the Bologna Declaration; implement 3-level study system and develop an international dimension of studies, thus adjusting the university education to the needs of the labour market; continue being one of the major centres of scientific research inseparably connected with academic teaching; acquire and use new technologies; participate in international education and training initiatives, conferences as well as international programmes and networks, increase students and teachers mobility; develop lifelong learning, especially considering needs of teachers; introduce courses taught in English not only for international students, but also for Polish ones. Many of such projects are run at various university faculties.

Wroclaw University of Technology participates in teaching and research programmes of the European Union (Erasmus, Erasmus Mundus, Tempus, Leonardo da Vinci, 6th and 7th FP etc.). It also is a member of several international consortia with EU and non-EU countries conducting students and staff mobility programmes and offering double degree programmes. Within the framework of the Erasmus programme, the university entered into an agreement with about 440 foreign universities. Every academic year about 300 students benefited from study abroad programmes, and the same number of foreign students visited Wroclaw University of Technology. Moreover, the university actively cooperates with governmental institutions in the educational field – the Ministry of Education and Sport, Ministry of Science and Higher Education, Department of Education, Regional Examination Committee, National Accreditation Committee and Technical Universities Accreditation Committee. Furthermore, the university is a member of Vice Chancellors of Wrocław and Opole Council of Universities and also a member of Vice Rectors of Education and Students' Affiars of Wrocław and Opole Council of Universities.

This exchange is possible thanks to the support offered by faculties which run English study programmes. This process began in the early 2000s and continues until today. Currently, various university departments offer studies in English (both the first and the second degree), altogether there are 37 such programmes. They are run as long as there are candidates who choose them. Offers of studies in English can be found [1,2].

Studies offered in English by WrUT contributed to the increased popularity of the University among both international and Polish students. Moreover we can observe that every year more and more exchange students at WrUT come back to Wrocław after their first cycle to continue their studies at the master's level. The growing popularity of our University is also due to the rapid development of local industry in Wroclaw, where our graduates can fairly easily find employment.

To achieve balanced international cooperation, it is very important to select appropriate partners for exchange programmes. At Wroclaw University of Technology, usually the following criteria are adopted:

1. Levels of studies and study programmes at a foreign university. Universities offering similar levels of studies and study programmes are preferred. The more similar they are, the easier it is for students to move in both directions and in the future it may also create an opportunity for cooperation and lead to more extensive exchange of didactic staff and offers of double diploma programmes.
2. International recognition of a partner university.
3. Geographical distribution of partner universities.
4. Language of instruction at a partner university: universities with English, followed by German and French are preferred. This results from a relatively good command of these languages among Polish students and academic staff.

Supporting and mentoring offered to incoming exchange students are very important in exchange programmes. At WrUT, this process begins with submission of student's application documents. The International Office directs these documents to the appropriate Faculty coordinator who becomes responsible for academic mentoring during student's stay at WrUT. The International Office provides free-of-charge pick-ups, Admission Days, a health and safety training, assistance of an administrative consultant, dormitories, counselling, support of the Rector's Plenipotentiary for Persons with Disabilities and psychological assistance.

Incoming students can participate in language courses and sport classes. Monitoring their progress in studies can be followed in the Edukacja.CI system. All students, including the international ones, can log in this system. Student organisations, such as ESN and UKSiDZ, organise team building activities and are responsible for the Buddy programme which helps students to settle in a new place and meet new friends. Monitoring progress in studies and internships of outgoing students is conducted through faculty coordinators who stay in touch with them all the time.

Cooperation with Latin America

For a few years Latin America has been a priority for Wroclaw University of Technology among directions of academic exchange and cooperation. Hence, the university has developed cooperation with universities in Brazil and Mexico. Instituto Politecnico Nacional in Mexico (IPN) is a university of a solid international strategy implemented through academic exchange also in co-operation with WrUT. Dr. Enrique DURÁN PÁRAMO, Coordinator for Academic Cooperation, National Polytechnic Institute, Mexico, said:

"Our commitment to building the IPN image and participation in the world is well known; therefore we looked at the map for those regions with limited or without presence of IPN. Within Europe, we have had long term and fruitful partnerships with several institutions; however, in the eastern region we had very limited activity. In Eastern Europe, Poland is considered the leading country with an important emerging economy and a diverse and rich culture.

In our opinion, IPN is recognised by providing best internationalisation strategy, thus we are committed to offer our top students an opportunity to acquire transferrable global skills which will give them a competitive profile in the global labour market. Therefore, we look for partners with the same commitment towards education of excellence in teaching and a good social environment. IPN being the leading institution in technological education in Mexico looks for recognised universities in Poland with technological traditions in order to meet IPN's expectations related to academic and research activities.

In terms of research at Wroclaw University of Technology we have identified many common areas with IPN in research interests, such as Power and Electrical Engineering, Energy, Environmental Studies, Nanoengineering, Computer Sciences, Production Management, Automotive Engineering and Advanced Technologies. Another important consideration was the availability of courses in English.

A decision was made to start cooperation with a student exchange programme to build foundation for other cooperation areas which would take us to the next step which would be joint research projects, mobility of faculty and double degrees."

The beginning of co-operation with Latin America at Wroclaw University of Technology is related to the EUBRANEX project (European-Brazilian Network for Academic Exchange) within the programme of the Erasmus-Mundus External Co-operation Window. This mobility scheme in the area of higher education co-operation launched by Europe Aid Cooperation Office and implemented by the EACEA. WrUT as partner of the consortium led by the TU München (TUM), hosted students from Brazil and sent our students to Brazil. The experience from these exchanges is very positive. We can clearly say that students who came to us from Brazil were among the best students in the exchange history of this university. One of them was offered to continue doctoral studies at WrUT. At the same time one of WrUT students staying at the Universidade Federal do Para was the best student among foreign students there.

Wroclaw University of Technology is currently involved in a project of the Erasmus-Mundus programme, coordinated by the University Nova of Lisbon. The FELLOW-MUNDUS (2013-17) project – Fostering Education and Learning mobility for Latin-American academics Outgoing Worldwide with ERASMUS MUNDUS covers all of Latin America, including many universities in Brazil, It focuses on exchange of students and staff between partner universities in the United Europe and Latin America. Within the project, grantees receive scholarships which cover monthly costs of living, a tuition fee, insurance (health, travel, accident) and travel expenses for one economy class round-trip. European Union partners are: Universidade Nova de Lisboa – UNL (Portugal), Universidad de Sevilla – US (Spain), Universidad de Salamanca - USAL (Spain), Wroclaw University of Technology – WrUT (Poland), University of Warsaw - UW (Poland).

Latin American partners are: Universidade Federal de Santa Catarina – UFSC - Co-coordination (Brazil), Universidad Mayor de San Simón - UMSS (Bolivia), Universidad Andina Simón Bolivar – UASB (Ecuador), Universidade Nacional de Itapúa - UNI (Paraguay), Universidad del Pacífico - UP (Peru), Universidade Estadual de Ciências da Saúde de Alagoas - UNCISAL (Brazil), Universidade Federal de Pernambuco - UFPE (Brazil), Universidade Tiradentes - UNIT (Brazil), Universidad de Panamá - UP (Panama), Universidad Santo Tomás - USTA (Colombia), Universidad de la República – UDELAR (Uruguay). We can exchange students at all 3 cycles of studies as well as post-docs and staff members.

Wroclaw University of Technology is a member of the prestigious T.I.M.E. Association (Top Industrial Managers for Europe) and now we are starting the exchange of students hoping to start double degree programmes in the nearest future with the University of Sao Paulo. WrUT has been an associate member of the T.I.M.E. Association since 2004 and it was the first Polish higher education institution to join the programme. T.I.M.E. is Europe's leading network for training of bi-cultural, bilingual engineers: Master-level Double Degree graduates. The main goal is to promote exchanges of students between 55 members. Students participating in these exchanges receive Double Degrees at Master or Doctoral level which are mutually recognized by the home and host institutions. The greatest strengths of the programme are: quality of bicultural education, international environment, mutual recognition, cultural diversity, internships in international companies and greater employability.

Conclusions

By participating in world-wide exchange programmes we expect to find solutions that will help us to improve our education processes through the modification of existing learning programmes. Academic mobility offers us an opportunity to exchange practices and to collaborate in order to strengthen future relations. Moreover, considering the sustainability of such cooperation, i.e. long-term post-projects, formal collaborative relationship with partners based on common interests, we can determine a number of benefits, for example: international recognition of Wroclaw University of Technology, fostered cooperation continued at various levels, improvement of the quality of educational system, access to new contacts, prospects for new projects, and a possibility of starting Joint Programmes. Additionally students and staff members participating in exchange programmes have an opportunity to learn and understand other cultures, which is so important to be successful in a global economic context.

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Jan Kwiatkowski received M.Sc. and Ph.D. degrees in Computer Science from the Institute of Technical Cybernetics, Wrocław University of Technology in 1977 and 1980, respectively. Since 1980 he has held the position of an adjunct at the Faculty of Computer Science and Management, Wrocław University of Technology. In the years 1987 - 1998 he acted as a deputy director responsibly for education. From 2002 to 2004 on sabbatical leave, he worked as associate Visiting Professor at the Mathematics and Computer Science Department at of the University of Missouri, St. Louis. Since 2007 he has acted as the Computer Science and Management Faculty Dean's representative responsible for foreign students, currently as the Dean's Plenipotentiary for International Relations. His area of scientific interest includes software engineering and parallel processing. He is mainly interested in parallel and distributed software design process, performance evaluation of parallel programmes and cluster/grid computing.

Student mobility between Latin America and France: the case of the Université Joseph Fourier, France

John Tuppen

Summary

National trends and policies have provided the context for the development of the international strategy of the Université Joseph Fourier (UJF) at Grenoble. Internationalisation has long represented a key characteristic of the university's activities and is evident in various ways such as collaborative agreements with foreign university research laboratories, joint thesis supervision (co-tutelle), participation in European and international educational programmes, the development of joint degree programmes at Masters' level and the reinforcement of international student mobility making it an integral part of study programmes. Exchanges of students, as well as other forms of academic collaboration with Latin American countries, are now established elements of the international activity of University Joseph Fourier. Their development demonstrates a number of principles and the variety of factors which have underpinned the University's mobility strategy.

Key words

Student mobility, internationalisation strategy, Université Joseph Fourier, services for foreign students, Latin America

Background

France has a long history of commitment to and involvement in the internationalisation of higher education and research and it is one of the world's major destinations for foreign students (outside the Anglo-Saxon countries). The French were a particularly strong advocate of the introduction of the Bologna process favouring student mobility within Europe and the country has initiated numerous schemes to favour the wider international mobility of students particularly at doctoral level. As in many other countries, internationalisation is related to a wide range of influences, including a series of institutional factors such as the initiatives of individual universities and their local partners (for example, Regional Councils) as well as to measures proposed by national bodies (such as the Ministry of Foreign Affairs and the French Rectors' Conference (CPU)) and by government promotional agencies, notably Campus France (1).

France now has over 250,000 'internationally mobile' students enrolled in universities, a figure which has increased constantly over the last decade (2); and this does not include the students participating in short-term exchange programmes. For example, within the context of the Erasmus programme alone, France receives over 23,000 students from other European countries and has more than 25,000 of its own students participating in this scheme elsewhere in Europe (3). However, while such movements are relatively balanced in terms of inward and outward movements, this is not the case for student mobility overall: French students studying abroad are outnumbered almost five times by foreign students coming to France (4).

Much of the recent world growth in student mobility has been fuelled by the demand from Asian countries and in particular China and India. In the case of France this is only partially true. Although students of Chinese origin now represent the second largest national group (nearly 30,000 students), the inflow of foreign students into France remains dominated by arrivals from the francophone countries of Africa which account for nearly half of the total: the dominant flow comes from Morocco, with more than 32,000 students (5).

A more detailed analysis of the movements of students coming to study in France also shows a growing number of arrivals from Latin America and especially from Brazil. Overall, more than 13,000 students originate from Latin America and France is the fourth most important foreign destination for such students in the world (6) (7). Educational links between Latin America and France have existed for many years but over the more recent past they have been encouraged by a growing willingness on both sides to enhance this collaboration, frequently assisted by the greater availability of financial assistance for prospective students and the reinforcement of institutional structures to facilitate movement.

At the same time, and as with other inflows of foreign students, various barriers to mobility remain. A recent official report has highlighted, not for the first time, several shortcomings which inhibit the ability of France to attract talented students and researchers from abroad (8). Attention is drawn to various administrative difficulties which make entry into France problematic, notably relating to obtaining a visa, as well as to insufficient academic support for foreign students once they arrive in the country and problems of finding suitable accommodation and receiving adequate training in the French language.

Université Joseph Fourier and the Grenoble context

National trends and policies have provided the context for the development of the international strategy of the Université Joseph Fourier (UJF) at Grenoble. The University has just over 15,000 students (9), concentrated predominantly in the areas of health and the natural sciences, although social sciences and engineering are also present. UJF is just one of five public-sector higher educational institutions located at Grenoble which together represent over 50,000 students; this figure compares with the city's population of around 405,000 people (10) and is indicative of the importance of higher education and research in the Grenoble urban region. Indeed, Grenoble is one of the major European centres of advanced research in the nano-sciences and micro-electronics (11); in addition, a number of internationally recognised research centres such as the ESRF (European Synchrotron Radiation Facility) are located in the city. Together the universities offer a broad range of complementary disciplines which is one factor that has encouraged increasing inter-university co-operation. This in turn has led to a series of projects over the last decade to create a single 'University of Grenoble'. Such a structure already exists in embryonic form, allowing close collaboration in fields such as internationalisation and doctoral studies, with current plans aiming to create a new, unified institution (Université Grenoble-Alpes) by 2015.

UJF is recognised as one of France's leading universities (12); it also benefits from a wider global image as a major scientific university through its classification in the top 150 universities of the 'Shanghai rankings' (13). As a result, internationalisation has long represented a key characteristic of the university's activities and is evident in various ways. These include: collaborative agreements with foreign university research laboratories; joint thesis supervision (co-tutelle); participation in European and international educational programmes; the development of joint degree programmes at Masters' level; and the reinforcement of international student mobility making it an integral part of study programmes. Currently there are more than 700 'internationally mobile' students studying at UJF (14), although, as at a national level, reciprocal flows are far less significant.

Latin American collaboration and UJF

Over the period 2004-2013, 173 students from Latin America came to study at the Université Joseph Fourier compared with 115 French students who moved in the reverse direction (15). Brazil dominates as the major source of students (36 in 2013/14) and it is also the principal destination for outward bound movements (12 students in 2013/14). Over time the strength of these exchanges has increased substantially; for example, in the academic year 2004-5 only one Brazilian student came to UJF and no students left for Brazil. Movements to and from other Latin American countries remain at a low level, involving two or three students per year in each direction for countries such as Argentina, Colombia, Chile and Mexico, but the number of universities and countries involved in exchanges is rising. While these figures are modest, they should be viewed in the context of the majority of Latin American students coming to France to study in the fields of the social sciences and the humanities, academic fields which are either under-represented in or absent from the teaching programmes of UJF.

This interest in Latin America, and notably Brazil, relates to several factors. First in relation to the countries of origin, it needs to be seen in the context of a strong internal demand for higher education, induced in part by demographic pressure, encouraging students to look abroad for opportunities to study (16). Studying abroad may be facilitated by the availability of grants as is the case currently in Brazil with the government's 'Science without borders' programme (17). Secondly, at the scale of Grenoble and UJF, present levels of movement reflect a policy of targeting specific universities and creating partnership agreements with these institutions; thus 14 universities in Brazil are involved currently in such an arrangement, providing a structured framework in which mobility can take place. In many cases, and not only in Brazil, these partnerships have been encouraged by long-standing collaboration between academics in various fields of research such as mathematics and informatics.

Thirdly, UJF has sought to benefit from exchange programmes supported by the French government favouring bi-lateral agreements with Latin American countries or from partnerships established between networks of universities in specific fields such as engineering. Thus since 2002 the BRAFITEC programme (Brésil France Ingénieurs Technologie) has enabled Brazilian students to follow engineering courses at UJF.

Fourthly, in the context of the university campus at Grenoble which associates several institutions, various inter-university initiatives have been launched to co-ordinate, and thus stimulate, the attraction and integration of foreign students. This policy is managed currently by the consortium of universities at Grenoble known as 'Université de Grenoble'. In part it aims to assist incoming students in finding accommodation, improving their knowledge of the French language and French culture and completing administrative formalities. At the same time, it co-ordinates different mobility programmes targeting specific regions. Thus, over the last ten years it has run the 'Grenoble-Brésil' initiative, designed originally to attract each year 50 Brazilian students to study on masters' programmes in the different universities at Grenoble. This number has now been increased, as students benefit from scholarships provided by the Brazilian government's own programmes (such as Science without borders). Under this initiative students are provided with practical assistance to facilitate their integration which includes ensuring that they have an appropriate academic supervisor.

Finally, a further stimulus to collaboration with Brazil utilised by the universities of Grenoble derives from the policies of the Regional Council of the Rhône-Alpes region (in which Grenoble is located) favouring student mobility and academic exchange. The Council has identified the state of Parana as one of the target regions for foreign collaboration and as such related mobility may benefit from specific funding, notably through the offer of student grants to partially offset the additional costs of foreign study.

Lessons from UJF's student exchanges with Latin America

Exchanges of students, as well as other forms of academic collaboration with Latin American countries, are now established elements of the international activity of University Joseph Fourier. Their development demonstrates a number of principles and the variety of factors which have underpinned the University's mobility strategy.

First, despite the importance of initiatives from within the University, it has long been recognised that for greater visibility and added-value for both the participating students as well as for the university (and without forgetting potential financial advantages), it is essential to participate in national and regional-led initiatives. In the case of Brazil this is shown by UJF's early involvement in the now defunct Franco-Brazilian doctoral college, its readiness to integrate the 'Science without borders' programme and its willingness to enter into the Rhône-Alpes region's Brazilian initiative.

Secondly, UJF has sought to diversify its regional base in Latin America but at the same time to work increasingly with a limited number of 'privileged' partners irrespective of the country in question. Long-term partnerships based on specific objectives are considered to offer greater mutual benefits to the universities involved. Thirdly, for more than a decade, UJF has worked in association with the other universities at Grenoble to provide common services (ranging from accommodation to language courses) for foreign students and a single contact point to facilitate their arrival and integration into the local community. Joint action in these fields is not only justified in terms of a more efficient use of resources but also because it provides incoming students with a clearer view of what the term 'university' means in the context of Grenoble where five higher educational establishments share the same campus! This approach is exemplified by the Grenoble-Brazil programme which since its inception has been based on a combined initiative of the different universities. In addition, such initiatives might be seen as at least a partial response to the criticisms outlined above concerning certain shortcomings in the welcome of foreign students to France.

Thirdly, for international mobility, the future merging of these institutions into a single 'University of Grenoble-Alpes' offers an unprecedented opportunity to refine and develop this operational model. It implies a further streamlining of services for foreign students and the chance to provide a more coherent programme of courses and academic opportunities susceptible to attract students to Grenoble. Latin American partnerships should flourish in this new environment given the commitment which exists in all the present institutions to enhance such links.

Finally, while this new university environment suggests many opportunities to combine resources and render Grenoble a more attractive destination, certain shortcomings related to the present patterns of mobility also need to be addressed. Amongst these, the lack of reciprocity in the volume and nature of student flows is of primary concern. This is indeed the situation with regard to exchanges with Latin America where the majority of movements are inward to France. Outward flows are in general limited to isolated cases, often in the context of doctoral programmes.

For the future there is the challenge of widening participation through encouraging the increased movement of Grenoble-based students to Latin America. This would also allow the University to contribute to the process of capacity building and curriculum development in the countries of this region. It is clear that promoting reciprocity does not in itself necessarily equate with the aim of reinforcing academic excellence through international student mobility; this depends as much on structural changes to higher educational systems as on individual motivations to move.

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The views expressed in this article are those of the author alone and do not engage Université Joseph Fourier.

A level playing field: Joint Master programmes as a foundation for mutually enriching alliances, German Rectors' Conference (HRK), Germany

Erwin Tschirner

Summary

German foreign policy has identified Latin America and the Caribbean as one of the most important partners in cultural and educational cooperation and development. This article describes the successful alliance between the Herder Institute, the oldest and one of the biggest departments of "German as a Foreign Language" in Germany and its partners in Latin America. Focusing on one such partnership in particular, i.e. the one with the German section of the Department of Foreign Languages at the Universidad de Guadalajara, Mexico, it will be illustrated how both parties benefit from ties established for and through a joint Master programme. Created more than five years ago, the alliance between the two departments may present a model for similar endeavors. It has so far brought about the successful implementation of a thriving bi-national Master's degree programme, an active academic exchange between both institutions and it has inspired several productive research projects on both sides.

Key words

Latin America, Mexico, German as a Foreign Language, Intercultural German Studies, joint Master, best practice

Introduction

Latin America has become a key region for German foreign policy. The international significance of this region continues to grow rapidly, not only because of its economies, but also because of its importance in the field of science and research Consequently, the highest priorities of the German Government's Strategy on Latin America and the Caribbean involve close cooperation with Latin America and "cross-border networking in the fields of science, research, education and culture" (Foreign Office 2010: 47). Included are the following goals:

- increase the interest in German as a Foreign Language (GFL)
- boost the range of scholarship and educational opportunities
- strengthen the network of foreign partner schools offering GFL courses
- expand the education and training of teachers of German in Latin America
- develop suitable programmes of study (Foreign Office 2010: 52)

Because Brazil and Mexico are two of the most populous countries in Latin America as well as members of the G20 and/or the OECD, they assume a special role in this endeavor. The alliances formed between the Herder Institute of the University of Leipzig (UL) and the Universidade Federal do Paraná, Brazil (UFPR) as well as the Universidad de Guadalajara, Mexico (UdG) have been a natural step towards achieving the above objectives. In addition, they contribute to the internationalisation goals of the participating universities and combine the strengths and expertise of all partner universities while at the same time supporting GFL Studies in Latin America.

German holds a special status in Latin America. It has been taught at school for more than 150 years. Competence in German is the key to economic and academic exchanges with Germany, which is why it has gained considerable popularity over the past decade (Foreign Office 2010: 51–52). The result has been a very high demand for qualified GFL teachers. The Herder Institute is meeting this demand in Latin America through the implementation of two bi-national double degree Master programmes:

- the bi-national MA programme in German as a Foreign Language: Estudos interculturais de língua, literatura e cultura alemãs with the Universidade Federal do Paraná

- the bi-national MA programme in German as a Foreign Language: Estudios interculturales de lengua, literatura y cultura alemanas with the Universidad de Guadalajara.

Having both languages in the programme title, of course, is part of the vision: a level playing field combining the strengths, the traditions, the ambitions and the dreams of two equal partners. In the following, the alliance between the Herder Institute and the UdG will be presented in some detail to describe a successful cooperation between Germany and Latin America.

From the beginning, intent on making the alliance work, the UdG established two full professorships for GFL. At this point in time, the UdG is the only Mexican university offering a modern Master's degree programme in GFL that is focused on theoretical and applied research, on contrastive analyses of language, culture and literature, on research in second language acquisition and in language teaching methods. The UdG has become the most important provider for study programmes in the area of GFL throughout Mexico and has become a center for Germany related scholarly and scientific cooperation. The cooperation between the Herder Institute and the UdG has been crucial in promoting GFL and Intercultural German Studies and has had an enormous impact on other universities in the region. Some of the steps in building and consolidating this collaboration will be described below focusing on both education and research.

The Alliance

Background

The Universidad de Guadalajara is one of the leading universities in Latin America. The implementation of a bi-national Master programme in GFL was discussed initially at two major conferences, the Congress of the Asociación Latinoamericana de Estudios Germanísticos (ALEG) in Havana in March 2006 and the Congress of the Associação Brasileira de Associações de Professores de Alemão (ABraPA) in São Paulo in July of the same year. The partnership between the UL and the UdG was established in 2007. In 2012, the cooperation agreement was renewed for another five years.

The alliance is funded by two programmes of the German Academic Exchange Service (DAAD), one supporting partnerships between German Studies Departments (since 2008), the other one a funding programme for international double-degree studies (since 2011). The alliance between the UL and the UdG aims to sustainably promote the German language in Mexico, Central America and the Spanish-speaking countries of the Caribbean by empowering a German section of a Foreign Language Department at a major university to excel in education and research. In particular, the goals of the alliance include the following:

- long-term support in the development of the German section at the UdG into a regional center of GFL Studies
- promotion of GFL teacher education in Mexico
- enrichment of GFL research and teacher education in Mexico with a positive thriving effect on Central America and the Caribbean

Other areas of cooperation between the institutions involve:

- developing curriculum and teaching materials for GFL within a Mexican context
- joint research projects including the supervision of PhD and graduate student theses
- joint organisation of conventions and conferences
- extending and strengthening the UdG German section's academic network with other German Studies Departments across the world

Consistent with DAAD funding goals for international double-degree studies, the UL and UdG alliance focuses on qualifying future German teachers for Mexican schools and teaching staff and researchers for GFL Studies at Mexican, Central American, and Caribbean schools, universities, and other educational and cultural institutions. In addition, the establishment, development and maintenance of the collaboration between the UL and UdG has been generously funded by the Mexican Ministry of Education through a one-time grant and annual support.

In 2013, the partner universities were able to build an even more solid foundation for the continued financing of the programme when the bi-national MA programme was included in the Registry of Quality Graduate Programmes (PNPC) of the National Council of Science and Technology (CONACYT). Through this programme Mexican students will be able to earn complete scholarships for the full duration of their studies in the bi-national Master´s programme.

The MA Programme

The fall of 2008 saw the first enrollments in the bi-national MA programme of the UL and the UdG after the curriculum and the study and examination regulations had been developed and implemented in close cooperation between both institutions.

Four to six students are enrolled at each university every year. Students spend their first semester at their home university, complete the following two semesters at the partner university, and return to their home institution for the final semester. Being simultaneously enrolled at both universities during the whole period of study ensures transferability of credit points and diplomas from both universities. During the fourth semester, students work on their MA thesis, which is supervised and assessed by staff members from both universities. The obligatory one year exchange allows MA students to immerse themselves into their respective target cultures, to acquire an international perspective, and to become familiar with local research interests and teaching practices. Supervised internships complete the programme.

Students of the bi-national MA programme benefit from the strengths of both partner institutions. While the Herder Institute is prominent in the area of linguistics, applied linguistics, language teaching, cultural studies, phonetics, and test research, the German section at the UdG offers expertise in the fields of cross-cultural translation studies, literary and cultural studies as well as contrastive linguistics. In addition to the regular MA classes, a series of seminars for "German as an academic language" is offered at the Herder Institute for their international Master's students. Likewise, German students attend a series of seminars in "Mexican Studies and Academic Spanish" at the UdG. Both series of seminars provide insights into the function and purpose of academic communication as well as the specifics of German and Spanish academic discourse.

The MA programme is intended to prepare both German and Mexican students for high-level positions in education, research, teaching, cultural management and international economic communication. The constant adjustment of the programme assures its alignment with the demands of current cultural and educational policy. The bilingual and bicultural graduates are well prepared to teach and do research in both countries while having been thoroughly trained to be expert language teachers. The MA programme thus contributes greatly to the qualification of young professionals teaching while at the same time preparing graduates for DAAD lecturer and language assistant positions as well as positions in similar organisations throughout Latin America.

Education and research

Career prospects

The graduates of the MA programme have excellent career prospects. Finishing their studies at their university of origin, students may accept employment in their home country immediately after graduation. So far, all Mexican graduates have found employment in Mexico. Quite a few of the German graduates have returned to Latin America after their studies working at Latin American institutions or for the DAAD.

Twelve German and four Mexican students have successfully graduated from the bi-national MA degree programme of the UL and the UdG. Nine Mexican and seven German students are currently enrolled in the programme, which brings the total to 32 students.

Many of the graduates have been offered positions as DAAD language assistants and lecturers on account of their education, experience, academic skills and intercultural competence. Five graduates worked or continue to work as DAAD language assistants at universities in Mexico, Brazil, Peru and Argentina. One graduate is at present DAAD lecturer in Ecuador. After completing their DAAD language assistantships, two graduates returned to Mexico, one of them to work at the UdG and the other one at the Language Centre of the Universidad Autónoma de Nuevo León. There are excellent career prospects for Mexican graduates, too. One of the graduates is currently employed at the Goethe Institute in Mexico City as GFL teacher and language course coordinator. Another graduate works as a GFL teacher at the Instituto Tecnológico y de Estudios Superiores de Monterrey and yet another one at the UdG.

Research projects and conferences

The alliance between the UL and the UdG has allowed for the successful completion of several joint research projects. As a direct result of a vigorous faculty exchange, teaching staff from both universities have been able to establish crucial research ties, strengthening the academic network between the German section (UdG), the Herder Institute (UL) and other partner institutions. Some of the most important of these projects include the following:

In November 2007, the symposium *Intercultural German Studies in the Latin American Context*: Visions and Scenarios was held at the UdG. It was intended to document what had been accomplished in Intercultural German Studies in Latin America and to serve as a sounding board for the implementation of regional bi-national MA programmes. A great number of representatives from major Latin American universities and DAAD lecturers from throughout the Americas (Mexico, Nicaragua, Colombia, Venezuela, Cuba, Brazil and the United States) participated in the symposium.

In 2010, an international workshop on *New concepts on the role of literature in GFL and International German Studies* was organized at the Herder Institute. The workshop was attended by 30 representatives of many partner institutions of the Herder Institute including experts from Brazil, Spain, Mexico, South Africa, Egypt, USA, Russia, Poland and the Ukraine.

Over the years, a very rich cooperation has been established between the Asociación Mexicana de Maestros Alemán (AMPAL,) and the teaching staff and students of the MA programme at the UdG. Staff and MA students regularly give presentations at AMPAL conferences and publish articles in the journal *Info AMPAL*.

Since 2011, the German section of the UdG and the Herder Institute have contributed richly to the academic programme of the International Book Fair in Guadalajara (Feria Internacional del Libro de Guadalajara). Representatives of the Herder Institute regularly give plenary papers, lectures and workshops. The events of the academic programme provide a unique opportunity to present research results in the field of German Literature, Linguistics and Applied Linguistics. In 2011, Germany was the host country of the Book Fair providing high visibility to the academic programme organised by the German section at the UdG.

An important milestone in the alliance between the UL and the UdG was the ALEG Congress in 2012 in Guadalajara. The ALEG Congress is the largest congress of German Studies and GFL in Latin America. Before 2012, it had taken place in Mexico only once in the 46-year history of the existence of ALEG, i.e. in Mexico City in 1994. The UdG attracted extensive attention from across Latin America, all German-speaking countries and a great many other countries of the world, thus strengthening its position as a center for GFL and Intercultural German Studies in Latin America and beyond. The alliance between the Herder Institute and the German section at the UdG was essential in organising the ALEG convention in Guadalajara. In turn, the congress provided new impulses to the German section at the UdG, its supporting networks, and the development of GFL in all of Latin America. Both partner institutions are currently preparing the publication of four volumes on the proceedings.

In May 2013, the first edition of the newly founded journal of the foreign language department of the UdG, *Verbum et Lingua*, was published. The journal discusses topics in linguistics, language teaching and adjacent areas. Several members of the Herder Institute are co-editors of the journal. By providing an outlet to a great number of research activities of the Center of Social Sciences and Humanities of the UdG, this joint effort, again, strengthens the cooperation between the UL and the UdG considerably.

With respect to the future of GFL in Mexico, MA theses and dissertations of young scholars may be the most important element of all joint research activities and collaboration. Three jointly supervised doctoral theses and numerous MA theses dealing with contrastive linguistics or with topics concerning foreign language teaching in Mexico have already been a proud product of the Leipzig Guadalajara alliance. Research projects like these all but guarantee the continued sustainable development and progress in all subfields of GFL/Intercultural German Studies in Mexico as well as continued successful cooperation in education and research between Germany and Latin America for the near and distant future.

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Bridging Europe and Latin America - The Brazil Centre of the University of Münster, Germany

Ricardo Schuch
Bernd Hellingrath

Summary

The Brazil Centre of the University of Münster was created in 2010 as an umbrella organisation to bring together activities and interests of the university members in relation to Brazil. It extends the knowledge about Brazil at the university, advises the university community in their interests related to research, research transfer, student exchange, teaching and courses of study in Brazil, stimulates the intensification of the existing cooperation and assists the university members in the establishment of new collaboration activities with Brazilian partners. Since its creation, the request for the services of the Brazil Centre from the university community as well as from individuals outside the institution has been growing continuously. Evidence of this development is the tripling in the number of its members. The Brazil Centre of the University of Münster is a strategic hub clustering excellence in academic exchange and an example of best practice in international cooperation.

Key words

Germany, Brazil, international research, academic exchange

Brazil - a “continental country” takes part in the international research community

Hardly more than 60 years separate a basically agrarian country almost completely dependent on technology import from today's dynamic contributor to the world scientific output. Brazilian efforts in the direction of a global player in science started in the early fifties, with the establishment of the federal funding agencies CAPES (Brazilian Federal Agency for Support and Evaluation of Graduate Education), under the Ministry of Education and Culture (MEC), and CNPq (National Council for Scientific and Technological Development), attached to the Ministry of Science and Technology (MCT)[1]. Together, these agencies have been and still are responsible for the formation of scientific expertise by supporting graduate schools, international mobility and research projects. Subsequently, the creation under the MCT of the Brazilian Agency of Innovation (FINEP) in 1967 allowed the support of science and technology projects, both in research institutions and enterprises, stimulating also transfer and innovation. Besides these federal agencies, the individual Brazilian States, allocating resources directly from their State Budgets, have established their own Research Foundations (FAP), the first one being the São Paulo Research Foundation (FAPESP) in 1962.

The huge development resulting from such measures is surely of extremely high strategic relevance. The annual number of students graduating in the country has risen to around 10,000, a growth of 1,000 % between 1987 and 2009 and a fourfold increase in 15 years from 1996 to 2011. As consequence, Brazil accounted for 2.7 % of the world scientific output in 2010, with a yearly growth average of 11.3 %. If the number of German scientific publications was 18 times that of Brazil 1981, Brazil had picked up to a factor of 2.5 by 2010. Compared to the USA the difference decreased from 82.9 times in 1981-1985 to 10.6 times in 2009, with a growth of 7.8 in the number of publications (USA 0.6)[2]. These are remarkable positive developments, which ranked Brazil at the 13th position in the world scientific output in 2009, overtaking countries such as The Netherlands, Russia, and Israel. The times when Brazil stood only for coffee, football and carnival belong to the past. Brazil today stands in the technological forefront in areas such as aeronautics, biotechnology and informatics, being the only country in the world to use a fully electronic system to compute the results of elections.

Germany and Brazil – scientific and technological partnership

Such a progress strongly recommends the country as a highly attractive partner for international cooperation and investments. Germany over time has become Brazil's third strongest international investor, a development that had its beginnings in the 19th century. By 2007 there were 1,200 German-Brazilian enterprises with about 250,000 employees, a significant German contribution to Brazil’s economic and social development[3]. From this total, 800 companies were situated in São Paulo, the largest concentration of German businesses in a single city worldwide. The number of German companies in São Paulo is even larger than that in Cologne, Munich and Hamburg.

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Concerning the cooperation in education and research Brazil is Germany's most important partner in Latin America. The scientific technological cooperation (German: wissenschaftlich-technologische Zusammenarbeit - WTZ) between Germany and Brazil is based on a general agreement from 1969, updated in 1996. A joint commission meets every two years to stipulate the thematic focuses of the cooperation. Thereto a specific "Plan of Action of the German-Brazilian Strategic Partnership" was signed 2008. The German Ministries for Foreign Affairs and for Education and Research (BMBF) together launched the "Initiative Foreign Policies 2009", creating a global network of five German Houses of Science and Innovation (German: Deutsches Wissenschafts- und Innovationshaus - DWIH), aimed at the intensification of scientific exchange and the initiation of new research cooperation and innovation projects between researchers in Germany and the respective partner countries. One DWIH was established in São Paulo, reinforcing the relevance of the German-Brazilian scientific and technological relationship.

In terms of academic cooperation, Brazil has become the most important partner of Germany in Latin America today, with Germany being in turn the third most important Brazilian partner in the world, after the USA and United Kingdom. To further strengthen this development, the BMBF in cooperation with the German Rector's Conference carried out the highly successful German-Brazilian Year of Science, Technology and Innovation 2010/11, with a volume of more than 100 collaborative events in both countries[4]. At present, the Ministry of Foreign Affairs with the support of the German-Brazilian Commerce Chamber, the Goethe Institute and the DWIH São Paulo is promoting the "Germany Year in Brazil 2013-2014".

European countries are important destinations for Brazilian students; they receive more than 67% of Brazilian scholarship holders abroad (USA 21%, Canada 3%). Preferred destinations are France (30%), Portugal (13%) and Spain (8 %), which is certainly connected with the relationship between the languages. With 9%, Germany ranks among the favourite four world destinations. The German Academic Exchange Service (DAAD) is one of the most important partners of CAPES worldwide. Since the 1980s both agencies have been working together in the support of academic mobility. The exchange programmes UNIBRAL and PROBRAL, jointly conducted by DAAD and CAPES, are examples of a successful joint venture stimulating academic cooperation projects on undergraduate and graduate levels. More recently the German Research Foundation (DFG) has signed specific agreements with the State agencies FAPESP and FAPEMIG, facilitating the establishment of joint research projects coordinated by scientific institutions allocated in Germany and, respectively, the States of São Paulo and Minas Gerais. The Brazilian agencies CAPES, CNPq and FINEP, with the DFG, initiated in 2008 the joint funding program Brazilian-German Collaborative Research Initiative in Manufacturing Technology, the BRAGECRIM. By 2010, the program was supporting sixteen collaborative projects, and it is planned to run for at least 10 years[5]. The Brazilian government in 2011 launched the huge scholarship programme "Science without Borders" (Portuguese: Ciência sem Fronteiras - CsF), coordinated by CAPES and CNPq and aimed at the improvement of specialized scientific and technical manpower in the next years. So far, more than 2,000 Brazilian undergraduate and graduate students as well as young PhDs have spent a study or research period in German institutions, supported by a stipend from this programme. The DAAD coordinates the programme in Germany; the goal is to reach 10,000 stipends in the next years.

[4] http://www.bmbf.de/pubRD/IB_DBWTI_Abschlussbericht.pdf
[5] Letter of Intent on the Second Phase of BRAGECRIM, 2009

The Brazil Centre of the University of Münster - tradition moving forward

Founded in 1780 the University of Münster (German: Westfälische Wilhelms-Universität Münster - WWU) is proud to offer in 15 departments a vivid, interdisciplinary, responsible as well as sustainable academic portfolio in research and teaching. With the two excellence clusters "Religion and Politics" and "Cells in Motion!, 11 winners of the Leibniz Prize, 14 affiliated institutes, including the Max Planck Institute for Molecular Biomedicine and the new Helmholtz-Institute Münster, eleven Collaborative Research Centres, five national and five international Research Training Groups as well as tree Marie Curie Initial Training Networks, the University of Münster has developed a strong research profile in natural sciences, the humanities, medicine, law and business administration. It targets top-level research in high-performance areas and combines this with promoting first-class junior research staff. At the same time, securing stable conditions for broad research, it creates a firm basis on which excellence can thrive. With around 800 PhDs awarded annually, the University of Münster is one of the five most important research institutions in Germany. The university's aims in the field of research are closely linked with its own commitment to provide high-quality courses of study covering a wide range of subjects and to establish through joint research solid structures for transnational knowledge exchange. With around 43,000 students the university is today the third-largest Higher Education Institution in Germany.

The University of Münster has a long tradition in relations with Brazil. A good omen was the fact that the first Brazilian student at the university, Reinhold Hendges, came from the city Bom Princípio (Good Start) in the State Rio Grande do Sul; he began his studies in Natural Sciences in June 1919[6]. There are records of active cooperation involving the Faculties of Pharmacy and of Law of the universities of Münster and Rio Grande do Sul already in the sixth decade of the last century, even before the signing of the German-Brazilian general cooperation agreement. Formal university agreements were signed in 1985, the oldest one with the Federal University of Santa Catarina (UFSC).

By the end of 2008, the widespread cooperation activities with Brazilian institutions included areas such as Politics, Religion, History, Education, Psychology, Economy and Information Systems, Law, Geosciences and Geoinformatics, Landscape Ecology, Microbiology, Plant Biotechnology, Pharmacy, Medicine including Pharmacology, Infectiology and Gynaecology, Chemistry, Physical Chemistry, Food Chemistry, Physics, Bionics, Music and Research Transfer, involving almost all 15 departments of the university. These activities involved contacts with about 20 Brazilian institutions; some of these based on formal cooperation agreements on institutional or departmental levels. Especially strong activities existed in the field of Research Transfer and Innovation, transcending even the level of pure academic relationships. Under the frame "Basis and Perspectives of the German-Brazilian Technology Transfer" a series of thematic videoconferences have been carried out between 2000 and 2009 in a cooperation of the German-Brazilian Commerce Chamber in São Paulo and the Innovation Office of the university. Furthermore, in 2007 this Innovation Office in collaboration with the Brazilian MCT and CAPES promoted the first "German-Brazilian Biotechnology Forum" – the "Bioforum" – as part of the international biotechnology fair "Biotechnica" in Hanover. A second Bioforum was carried out 2008 in São Paulo.

At the end of 2008, a group of persons including prominent Brazilian alumni of the university and some professors with connections to Brazil met and, after discussing the intensity and strategic importance of the university's Brazilian contacts, decided to suggest the establishment of an institution to bring together and support such activities. After one year of feasibility studies and structural conceptions, just at the time of the installation of the DWIH and before the election of Brazil to host the World Cup and the Olympic Games, the Brazil Centre of the University of Münster was founded on March 15th 2010[7], with head-quarters in Münster and an office at the DWIH in São Paulo.

[6] http://sammlungen.ulb.uni-muenster.de/nav/classification/1643213
[7] http://www.uni-muenster.de/Brasilienzentrum/brasilien-zentrum/geschichte.html

Figure 1. Opening ceremony of the Brazil Centre: Prof. Dr. Ursula Nelles, Rector of the University of Münster, Prof. Dr. Bernd Hellingrath, Scientific Director of the Brazil Centre and Dr. Wilhelm Bauhus, Director of the Innovation Office..
Foto: WWU - Julia Holtkötter

The Brazil Centre aims to broaden the knowledge about Brazil at the university, to advise all university members in matters concerning research, research transfer, academic exchange, teaching and courses of study in Brazil, and to encourage the intensification of the existing cooperation as well as support the establishment of new collaboration activities with Brazil. Particular attention is paid to the establishment of contacts to Brazilian research institutions and to the monitoring of funding programmes in Brazil and Germany. The Brazil Centre's office in the DWIH supports Brazilian students and academics interested in study and exchange visits to Germany as well as travels of research delegations, and facilitates direct contact with strategic partners, such as Universities, CAPES, CNPq, FAPs, the German embassy and consulates, representatives of German research organisations in Brazil and representatives of Brazilian universities. It provides a basis for contacts between Brazilian and German universities.

Figure 2. Prof. Dr. Stephan Ludwig, Vice-Rector for Research of the University of Münster and Dr Ricardo Schuch, Executive Diretor ofthe Brazil Centre, at the opening of the office at the DWIH

A board of directors consisting of three professors of the university and a core membership constitute the Brazil Centre. Members of the Brazil Centre are all interested employees of the university with a concrete activity related to Brazil. The Centre is coordinated by a scientific director and an executive manager.

The impulse given to Brazil-related activities by the establishment of the Brazil Centre of the university is reflected by the tripling in membership as shown in Fig. 2.

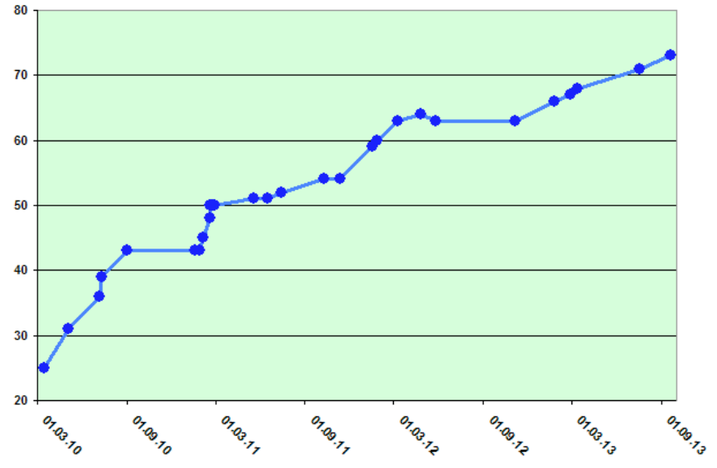


Figure 3. Evolution of the Brazil Centre's membership

The number of institutional as well departmental agreements has grown by more than 50 % since the creation of the Brazil Centre, and new ones are presently under negotiation. A very special and important agreement was signed with the CAPES: it established a "Brazil Chair" at the University of Münster, associated with the Brazil Centre. The first person to accept this Professorship was Prof. Dr. Fernando Batista da Costa from the Pharmacy Faculty of the University São Paulo (USP), campus of Ribeirão Preto. Currently the Brazil Chair is held at the Institute of Geoinformatics by Prof. Dr. Gilberto Câmara, former executive director of the Brazilian Institute of Spatial Research (INPE) and Doctor honoris causa of the University of Münster. The Professorship has a maximal duration of two years and is open for all academic areas of the university.

Figure 4. Prof. Dr. Jorge Almeida Guimarães, President of CAPES, with Rector Prof. Dr. Ursula Nelles, the other members of the rectorate, and the directors of the Brazil Centre of the University of Münster, after the signing of the bilateral cooperation agreement. Foto: WWU - Peter Grewerr

The Brazil Centre plays a strong role in the initiation of new projects. Significant logistic support is given through the notification of program calls, which has so far resulted in cooperation projects submitted to the programmes UNIBRAL, PROBRAL, BRAGECRIM and a joint call CNPq-BMBF, a relevant number of them approved for funding. The PROBRAL project "Application and Extension of Meta-Heuristics for Supply Chain Planning" of the Institute of Information Systems in collaboration with the University of Pernambuco and the Federal University of Ceará recently won the 2013 Brazil-Europe Top-3 Award for Collaborative Research from Institute for Studies Brazil Europe.

Especially during the German-Brazilian Year of Science, Technology and Innovation 2010-2011 the action of the Brazil Centre was decisive for the acquisition of a relevant number of projects, thus placing the University of Münster at the front of the university activities in this event. An overview of the projects coordinated or assisted by players of the university can be seen in Table 1.

Table 1 Activities of the University of Münster at the German-Brazilian Year of Science, Technology and Innovation

EVENTLPROJECT	COORDINATION	LOCAL	YEAR	PARTNER
Research Symposium GIScience for Environmental Change (GeoChange)	Institute of Geoinformatics	São José do Rio Preto	2010	Brazilian Institute of Spalial Research
Master Class Inspired by Minds and Nature	Inniation Office and Brazil Centre	Florianópolis	2010	Federal University of Santa Catarina
German-Brazilian Leadership Trairing Program	Inniation Office and Brazil Centre	Münster	2011	DWIH
Workshop GI@School Brasil	Institute of Geoinformatics	São José dos Campos	2011	Brazilian Institute of Spalial Research
FutuResCo	Brazil Centre	Florianópolis	2011	Federal University of Santa Catarina
Brazilian-German Research Initiative on Natural Products against Neglected Diseases	Institute of Pharmaceutical Biology and Phytochemistry	Münster	2011	-
DAAD Brazilian Day "Discover Brazil"	DAAD	Münster	2011	University of Münster International Office and Brazil Centre
IT-supported Networks	Institute of Information Systems	Florianópolis	2011	Federal University of Santa Catarina

Carrying on this work, the Brazil Centre presently supports university projects proposed for the "German Year in Brazil". In this context, the Innovation Office and the Botanic Garden of the University of Münster conducted the exposition "Evolution-Conflict-Truth – Fritz and Hermann Müller" in cooperation with the Brazil Center, the Institute of Geoinformatics presented the so-called "Triangle of Sustainability" on different occasions in Brazil, and the Faculty of Music proposed the workshop "Cello in Concert – German-Brazilian Cello Ensemble"

A particularly significant work of the Brazil Centre is the engagement in the promotion of the University of Münster outside as well as in Germany. In this context, the Brazil Centre takes part in various Promotion-Tours and Road Shows in Brazil. And in 2012, it organised a road-show of the Brazilian Association of Rectors of State and City Universities, visiting eleven institutions in the German states of North-Rhine Westphalia, Baden-Württemberg and Bavaria, with the support of Baden-Württemberg International (bw-i) and the Bavarian High School Centre for Latin America (BayLat), respectively.

Figure 5. ABRUEM delegation visiting the University of Münster. Foto: WWU - Peter Grewer

Since the launch of the program Science without Borders, the Brazil Centre has been engaged in its application and, together with the International Office, coordinates its administration at the university. With the implementation of a central tutorial board, the Brazil Centre offers crucial assistance to the Brazilian grant holders, a guaranty for a successful and profitable stay in Münster.

Table 2 CsF scholarships at the University of Münster

STIPEND MODALITY	NUMBER OF STIPENDS	AREA
Undergraduate study	18	Biology, Landacape Ecology, Physica, Medicine Study, Medical Clinic, Information Systems
PhD	8	Pharmacy, Food Chemistry, Battery Research, Medicine, Information Systems, Mathematics
Post-Docs	2	Mathematics, Nanotechnology

Summarizing, the Brazil Centre is not a centre for Brazilian studies, as sometimes mistakenly assumed, but a strategic hub for academic cooperation and exchange, clustering excellence and connecting Europe and Latin America.

Figure 6. Lucas Sartori, CsF-awardee at the University of Münster - "Another differential factor here is the presence of the Brazil Centr of the University of Münster, which acts as a joining agent for the Brazilian awardees at the university, making our daily routine easier, be it through the support for the resolution of bureaucratic questions or by the amusement and interaction promoted by the monthly organised meetings, which might be even a good opportunity to enjoy a delicious feijoada".

Figure 7. Meeting of the Brazil Centre with CsF-awardees

Author

Ricardo Schuch

Dr. Ricardo Schuch, born in São Paulo, Brazil, concluded his studies in Pharmacy and Biochemistry in 1976 at the Faculty of Pharmacy of the University São Paulo. In 1987, he received his PhD in Food Science at the same faculty, after a research period at the Federal Institute for Fat Research in Münster. Until 1988 he gave lectures on Food Technology at the University São Paulo. Since 1989, he has been living in Münster, where he has been research group leader at the Institute of Biochemistry of the university and at the Institute of Chemical and Biochemical Sensor Research. Working later at the Innovation Office of the University of Münster he organised the 1st German-Brazilian Biotechnology Forum. Since 2010 he is the Executive Director of the Brazil Centre.

Bernd Hellingrath

Prof. Dr.-Ing. Bernd Hellingrath studied Computer Science and Mathematics at the University of Dortmund and got Ph.D. in Mechanical Engineering from the University of Dortmund. He was researcher and consultant at the Fraunhofer Institute for Material Flow and Logistics (IML) and Head of the department Enterprise Modelling at the Fraunhofer IML. Since 2008 he is Professor for Business Computing and Logistics at the University of Münster. Since 1998 he gives lectures at the university and in a number of industrial education seminars processes and IT systems for supply chain management and application of simulation in logistics. He finished numerous research and consultancy projects in the area of logistics, supply chain management and IT systems for logistics. Since 2010 he is the Scientific Director of the Brazil Centre.

CELA: A Network of Climate Change Technology Transfer Centres in Europe and Latin America, Hamburg University of Applied Sciences, Germany

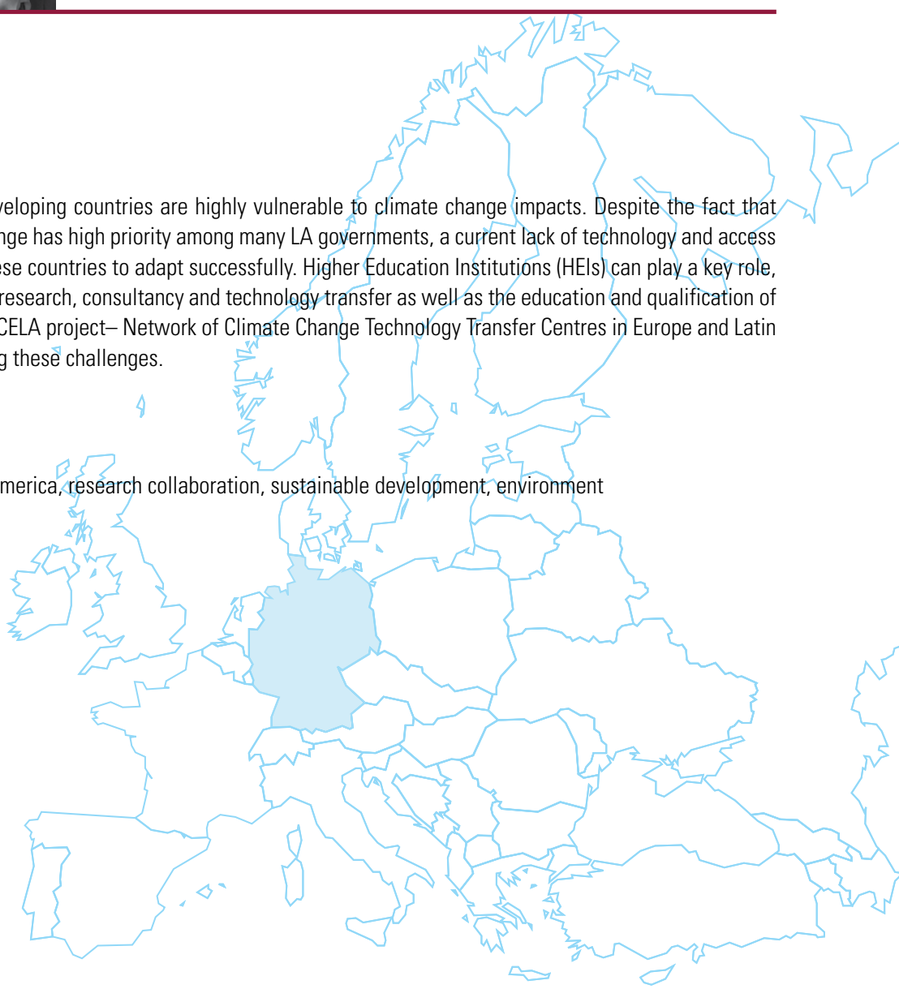
Walter Leal
Franziska Mannke

Summary

Latin American (LA) developing countries are highly vulnerable to climate change impacts. Despite the fact that adapting to climate change has high priority among many LA governments, a current lack of technology and access to resources hinders these countries to adapt successfully. Higher Education Institutions (HEIs) can play a key role, for example in terms of research, consultancy and technology transfer as well as the education and qualification of future employees. The CELA project– Network of Climate Change Technology Transfer Centres in Europe and Latin America aims at tackling these challenges.

Key words

Climate change, Latin America, research collaboration, sustainable development, environment



Rationale of the CELA Project

Latin American (LA) developing countries are highly vulnerable to climate change impacts. Despite the fact that adapting to climate change has high priority among many LA governments, a current lack of technology and access to resources hinders these countries to adapt successfully. Therefore, there is a need for international assistance to enable Latin America to cope with the many challenges climate change poses to them. It is on the basis of the above needs, the CELA project– Network of Climate Change Technology Transfer Centres in Europe and Latin America is being proposed as part of the ALFA III Programme of the European Union. The purpose of the project is not only to improve the academic quality of European and Latin American higher education institutions (HEIS), but also to strengthen the role of HEIS to contribute to sustainable development and social cohesion (CELA 2013).

Higher Education Institutions (HEISs) can play a key role, for example in terms of research, consultancy and technology transfer as well as the education and qualification of future employees. A problem seen today is that, despite the importance of the topic climate change and diverse existing and developing expertise at Latin American HEIS, the potential of these institutions to offer solutions for climate change adaptation and mitigation is not sufficiently developed. International cooperation and the establishment of formal structures in LA countries which allow joint research collaboration, exchanges of experiences and lessons to be learnt among different institutions in the region is very important due to the global, interdisciplinary nature of climate change (CELA 2013).

A problem seen today is that, despite the importance of the climate change topic and the expertise available at Latin American higher education institutions (HEIs), the potential of these institutions to offer solutions for climate change adaptation and mitigation is not sufficiently developed. The transnational collaboration project teams work under the premise that international cooperation and the establishment of informal as well as formal structures in LA countries -which allow joint research collaboration, exchanges of experiences and lessons to be learnt among different institutions in the region- may help it to better handle the interdisciplinary challenges posed by climate change (CELA 2013).

Objectives

CELA aims at improving the quality of research and technology transfer of Latin American universities, strengthening the role of those HEISs in the sustainable socioeconomic development and foster sustainable research and technology transfer cooperation between higher education institutions in Latin America and the EU.

The CELA project focuses on the thematic sector of Climate Change because mitigation and adaption to climate change are of vital importance for the **sustainable socioeconomic development** in Latin America as well as in Europe.

CELA will foster EU-LA **applied research and technology transfer** in the climate change sector. CELA will lead to with the set-up of an infra-structure called **Technology Transfer Centres** which will be making better use of the science and technology knowledge existing in the participating regions and in setting-up **networks to intensify joint EU-LA** applied research in the field, in support of socio-economic development. Since lack of expertise and access to knowledge is a major impediment to tackle the challenges of climate change, the project entails the development of **highly-qualified research staff** and research institutes, which will play a very important role in training people and **providing expert advice** (research and technology transfer) and thereby have a positive, long - term impact on the socioeconomic development in the participant LA countries and beyond.

The **specific objectives** of the CELA project are:

1. To increase the capacity and to improve the quality of research within the scientific and technology community in LA and EU

2. To develop and establish a market-oriented research framework to better capitalise and disseminate research on climate change

3. To strengthen the link of EU and LA research communities with the regional market, business and legislation (policy) in the field of climate change

4. To develop and establish a market-oriented EU- LA network of Climate Change Technology Transfer Centres

The project will ultimately greatly assist efforts in LA to provide a market-oriented research and technology transfer approach, complemented by establishing specific recommendations for the different regions of how to excel within HEIs in the region and beyond. In doing so, the project will address a set of issues seen in the Millennium Development Goals such as fighting poverty and pursuing environmental sustainability (CELA 2013).

The Partnership

The project entails cooperation between European and a set of Latin American countries, being implemented over the period 2010-2013, as part of the ALFA Programme. ALFA is a programme of co-operation between higher education institutions of the European Union and Latin America. However, CELA does not only aim at improving the academic quality of European Union (EU) and Latin American higher education institutions, but also intends to strengthen the HEIs' role so as to contribute to sustainable development and social cohesion in Latin America. HEIs are regarded as key players, for example in terms of research, consultancy and technology transfer as well as in the education and qualification of current and future employees.

The European Union (EU) funded project CELA (Network of Climate Change Technology Transfer Centres in Europe and Latin America) was launched from 2010 to 2013 among six public and private universities across Europe (Estonia, Germany) and Latin America (Bolivia, Guatemala, Nicaragua and Peru):

- Hamburg University of Applied Sciences, Germany
- Universidad Galileo, Guatemala
- Universidad Católica Boliviana, Bolivia
- Universidad de Ciencias Comerciales, Nicaragua
- Pontificia Universidad Católica del Perú, Peru
- Tallinn Technical University, Estonia

Activities undertaken

The project CELA meant to foster EU- Latin American **applied research and technology transfer** in the climate change sector. It did so by setting-up an infra-structure called **Technology Transfer Centres**, which makes better use of the science and technology knowledge existing in the participating regions, and in setting-up **networks to intensify joint EU**- Latin American applied research in the field, in support of socio-economic development. Since lack of expertise and access to knowledge is a major impediment to tackle the challenges of climate change, the project also entailed the development of **highly-qualified research staff** and research institutes, which can play a very important role in training people and **providing expert advice** (research and technology transfer) and thereby have a positive, long –term impact on the socioeconomic development in the participant Latin American countries and beyond.

During the implementation of the project, special attention was given towards fostering the multidirectional flow of knowledge and technology transfer and towards developing a joint collaboration platform between European and LA universities in the thematic sector of climate change. This initiative was implemented in key areas of the project's **activities**:

- Assessment of needs for the provision of relevant climate change research, innovation and training among universities, businesses, governments and civil society;

- Local and international capacity-building tailored to the specific needs of researchers, university staff and other interested stakeholders;

- Setting up and implementing an accompanying network of six Climate Change Technology Transfer Centres (CCTTC);

- Practical implementation and testing of climate change adaptation techniques in the pilot areas of Bolivia, Guatemala, Nicaragua and Peru, with a specific focus on water monitoring and sustainable agro-forestry management;

- Provision of scientifically sound information about climate change; including the dissemination of project activities and results to contribute toward the sustainable development of the host countries.

Results obtained

The set-up of a dedicated networking infrastructure of so-called Climate Change

Technology Transfer Centres (CTTCs) resembles a core result of the CELA project: this networking structure serves not only to make better use of the science and technology knowledge existing in the partnering countries, but local networks have developed, which link the initiating university with further universities, with industry and government actors, and also with the civil society. Moreover, through being embedded in the EU-LAC network, good relations to the international academic community could be established which can foster and intensify joint applied research in the field and between Latin America and Europe in support of truly international sustainable socioeconomic development. The virtual (www.climatetechcenter.net; www.cvtt.org) or physical CTTCs act as "knowledge hubs"; they strengthen links and climate knowledge exchange not only in the academic sense but also beyond, i.e., with actors in regional markets, in businesses, and with decision-makers (policy) in the field of climate change. These links are further strengthened in the frame of dedicated capacity-and network-building actions, actively involving the main beneficiaries of the project. CELA also comprises capacity-building actions for the research staff of the partnering universities. The ultimate goal of this comprehensive capacity-building programme serve to provide an enabling environment for technology transfer, i.e. creating technological as well as adaptive capacities by means of training staff and providing expert advice and latest climate knowledge to stakeholders from academia, industry, and politics (Mannke 2012).

Finally, the four Latin American project partners developed own pilot projects in collaboration with and to the benefit of civil society. These pilots, all of which included local capacity-building actions and were combined with clever ownership of local stakeholders and involvement of university students, with the latter ensuring proper maintenance of the new technologies and fostering local commitment and ownership. Grounded in local needs, appropriate technology has been implemented in collaboration with local communities. In other situations and in cooperation with government players, technological capacity has been built with reference to the following four CELA pilot technology projects in the participating Latin American countries:

- Guatemala: early warning system in a flood-prone area in Guatemala
- Peru: wireless monitoring network in the Peruvian Amazon Forest
- Bolivia: sustainable forestry management centre for local communities
- Nicaragua: new water monitoring mapping and building technological expertise among government representatives

All in all, the project managed to reach the following **final beneficiaries**:

- More than 180 research, teaching, administrative and management staff benefitted either from new research, cooperation or networking opportunities kicked-off by CELA or from the provision of concepts and recommendations developed within CELA which may contribute to continuously enhance the teaching, research and technology transfer activities. Links with other EU programmes such as Horizon 2020 and Erasmus+ may also be pursued in future.

- Over 180 EU/ Latin American enterprises and other private or public institutions in the Climate Change sector, which have received project information and/or benefitted from the local availability of expertise and from the research partners.

Finally, the general EU/ Latin American population have benefitted economically and environmentally from the increased capability of key actors for tackling the challenges of climate change. The project assisted efforts in Latin America to provide a market-oriented research and technology transfer approach, complemented by establishing specific recommendations for the different regions of how to excel within the HEIs region and beyond. As such, the project addressed a set of issues seen in the Millennium Development Goals, e.g. poverty eradication and environmental sustainability (Leal Filho and Mannke 2013).

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JELARE: A joint European Latin American project on renewable energy in higher education institutions, Hamburg University of Applied Sciences, Germany

Julia Gottwald
Walter Leal

Summary

Technical and methodological support is needed to implement technologies, strategies or political frameworks for renewable energies. The nature of the topic calls for innovative approaches therefore Higher Education Institutions play an important role in research and education in this field. JELARE (Joint European-Latin American Universities Renewable Energy Project "Fostering innovative labour market-oriented educational & research approaches in the field of renewable energies at Latin American and European institutions of higher education") was initiated with the objective to introduce renewable energies to the curricula of Latin American universities.

Key words

International education, research, renewable energy

Introduction

Apart from environmental benefits, renewable energies offer great potential for local socio-economic development in Latin America. As renewable energies can be produced locally, they provide a wide range of local job opportunities (from high-skilled to low-skilled labour, from high-tech to agriculture), foster local investments and reduce the need for importing fossil fuels. However, the sector of renewable energies cannot develop adequately due to a lack of expertise. Local enterprises and other public and private institutions involved in the renewable energy sector are in great need of technical and methodological support in order to implement technologies, strategies or political frameworks. Due to the innovative nature of this field, HEIs are very important actors in this sector, especially in terms of research and educating future employees. Despite the value of the topic of renewable energies, it is not yet prominently featured in the curricula of Latin American universities (or EU universities). On the basis of the above needs, the JELARE (Joint European-Latin American Universities Renewable Energy Project "Fostering innovative labour market-oriented educational & research approaches in the field of renewable energies at Latin American and European institutions of higher education") project was undertaken in the period November 2008 to November 2011, funded by ALFA III, an EU programme for co-operation between the European Union and Latin America. The purpose of the project was not only to improve the academic quality of European and Latin American higher-education institutions, but also to strengthen their role in contributing to local economic development and social cohesion.

The project was a cooperation scheme involving universities from Germany (Hamburg University of Applied Sciences), Latvia (Rezekne Higher Education Institution), Bolivia (Bolivian Catholic University), Brazil (University of the South of Santa Catarina), Chile (University of Chile) and Guatemala (Galileo University) with the aim of fostering innovative labour market-oriented educational and research approaches in the field of renewable energy at Latin American and European higher-education institutes (HEIs).

Four specific objectives were set for the project:

- to develop and implement labour market oriented research and educational approaches in the field of renewable energy;
- to increase the capacity of university staff to modernise their educational and research programmes and activities;
- to strengthen the link between universities and the labour market, business and the public sector in the field of renewable energy;
- to establish a long-term partnership and network between European and Latin American universities.

To meet these objectives, the activities of the three-year JELARE project included:

- Conducting a renewable energy labour market survey in Germany, Latvia, Bolivia, Brazil, Chile and Guatemala;
- Developing teaching and research concepts for renewable energies;
- Developing and implementing teaching and research pilot modules for renewable energies;
- Conducting a university staff capacity building programme;
- Setting up an international JELARE network, with local subgroups in the partner countries, organising networking events and an international conference.

Results

JELARE survey results

As part of the JELARE project, a set of three surveys was carried out in Bolivia, Brazil, Chile and Guatemala as well as in Germany and Latvia. The objectives of these surveys were to identify the needs of the labour market regarding education and research in the renewable energy sector, to identify the training needs of university staff in the renewable energy sector and to benchmark renewable energy activities among HEIs.

It was seen – despite different levels of development in the renewable energy sector in the six JELARE countries – that there are a number of similar problems and perceived needs in the labour market. Enterprises working in the renewable energy sector have difficulties recruiting appropriately qualified staff. Enterprises see universities primarily as providers of education and training rather than as research and development partners. The majority of enterprises believe that universities are behind the market needs. The surveys conducted among higher education institutions also revealed some results that are common to all countries:

The staff of the universities involved is conscious of the discrepancy between market reality and academia. This awareness comes with actual proposals to reduce the existing gap through substantial investments in human resources and in teaching and research infra-structure in the renewable energy field.

Furthermore, a need for better integration with industry in different fields and activities related to renewable energy has been identified, for example in applied research sponsored by industry, courses and seminars, as well as offers of internships for university students.

The study also revealed that university staff believes that there should be governmental financial support for research in renewable energy, together with a constant monitoring of the professional trends and market needs. The comprehensive report on the findings of the JELARE labour market survey is now available in form of a book entitled „Renewable energy market needs: a perspective from Europe and Latin America", edited by the JELARE partners José Baltazar Salgueirinho Osório de Andrade Guerra and Youssef Ahmad Youssef from UNISUL

(http://www.jelare-project.eu/ Downloads/JELARE-Renewable-Energies-Market-Needs-Book.pdf)

Strategic plan for fostering renewable energy topics

On the basis of the survey results, all partners have developed concepts or a strategic plan for the inclusion of renewable energy topics in teaching and research/technology transfer. Each partner has prepared a document that comprises both teaching and research aspects.

For example, the University of Chile has focused its strategic concept efforts on two main education / research elements. The first involves the creation of a Minor in Renewable Energy, considering that there was a rigid curriculum beforehand which made it easy for the engineer profile to disregard market needs, and it was also difficult to provide multidisciplinary profiles. The second involves the creation of the Energy Centre, which focuses on the development of technology at local and regional level.

The German partner, HAW Hamburg, already has a general university-wide strategy for renewable energy and energy efficiency, which comes to the fore in the CC4E – Competence Centre for renewable energy and energy efficiency. The JELARE project thus focused on developing a specific strategy for the Research and Transfer Centre "Application of Life Sciences" regarding international technology transfer in the renewable-energy sector. FTZ-ALS wishes thereby to enhance the diffusion of renewable energy to support sustainable development on a local and global scale. The strategic objectives include increasing networking with international actors in science, R&D and KTT, enhancing science marketing, communication and visibility, organising events and workshops, stimulating large-scale international applied-research projects, and developing internal competences, skills and capabilities for international technology transfer.

Pilot modules

E-learning: sustainability, environment and renewable energy - a transnational training pilot module

A pilot module has been implemented by 4 JELARE project partners in Bolivia, Brazil, Guatemala and Latvia. Research was carried out by them in their own countries, where a scarcity of multidisciplinary programmes was detected at postgraduate level. The common characteristic was the need to modernize the curriculum by introducing a more diverse perspective. The student profile at the end should aim to provide skills to the private, public, non-governmental and academic sectors. The syllabus consists of 13 courses resulting from an analysis of the competencies needed, based on three modules: Sustainability, Environment and Renewable Energy (with courses such as Sociology of Development and Global Challenges, Environment and Sustainable Development, Energy Matrix Planning, Energy Economics, Policies and Regulations on Energy and Environment and other courses devoted primarily to renewable energy and its management). The postgraduate programme is to be implemented over 4 terms. Online teaching methods have been introduced focusing on self-study, cooperation and tutorial guidelines. The module is now open for activities.

Small stand-alone RE systems – a transnational technology transfer pilot module

Many rural communities in developing countries face problems related to infrastructure and the availability of public services such as power supply, water, heat and communications. In the case of power supply, there are communities which are still not connected to the power network, so that their power comes from small diesel generators or alternatives such as lighting candles, batteries, or other fuels. The arrival of new technology developments related to renewable energy is making it feasible to regard these new technologies (wind, microhydro, solar PV, and others) as a solution for these isolated communities in terms of energy supply. It is also important to note that there is a high potential for renewable energy sources; in the case of Latin American countries, this potential may come from hydro, solar and wind energy. This pilot module was dedicated to the development of stand-alone solutions based on renewable energies for rural electrification, providing training and advice to other partners who do not have the necessary knowledge and background. The JELARE partners in Bolivia, Brazil, Chile and Germany participated in this pilot module and collaborated in developing practical renewable energy systems that are now used for education, research and technology transfer.

For example, a Renewable Energy Technologies Development Centre has been established in Bolivia. It is based at the Rural Academic Unit in Batallas and aims to educate students at this rural university, which will host a new course of study on renewable energy solutions; it also serves as a centre for providing capacity-building seminars for municipal technicians, rural teachers and other stakeholders from remote areas. Finally, it will be used to introduce people from the surrounding rural communities to these technologies, which can bring electricity, warm water and (bio)gas for cooking into their homes.

Capacity-building seminars

Over the three years, the JELARE project held many capacity-building seminars aimed at raising the capacity of HEI staff (administrative, teaching and research) to develop and deliver high-quality teaching as well as research and technology transfer, both generally and in the particular field of renewable energy. More than 20 seminars with more than 400 participants have been organized in all six partner countries, of which the following were some of the highlights:

Brazil: international JELARE capacity-building seminar on e-learning

The seminar was held in Florianópolis between 6th and 8th July 2010 and was an opportunity within the context of the JELARE project to foster knowledge and technology transfer between UNISUL Brazil and representatives of partners HEIs in Latvia (Rezekne University), Guatemala (Galileo University) and Bolivia (Bolivian Catholic University "San Pablo"). Over three days, the JELARE delegations from these four countries worked together on curricula development and distance-learning technologies and methodologies as applied to the field of renewable energies and sustainable development.

Bolivia: local capacity-building seminar about the modeling programme LEAP

Another capacity-building seminar took place in September 2010, at the Bolivian Catholic University. The seminar was concerned with the LEAP ("Long-range energy alternatives planning system") Modelling Programme, which is a software that allows energy policies, climate change mitigation measures and other energy-related scenarios to be analyzed and evaluated, measuring their scope and impact in the medium and long term. Capacity-building was aimed at the staff of the Institute of Socio-Economic Studies (IISEC), thereby contributing to their research activities in energy economics and energy planning.

Recommendation report

One of the final outputs of the JELARE partnership is a recommendation report for improving the quality of education and research activities of higher education institutions and for strengthening their role in regional socioeconomic development. These recommendations are based on the experiences gained by the JELARE partners during the three-year project. The report is also addressed to other European and Latin American universities that also plan to increase the attention given to renewable energy in their research and teaching activities.

This report is structured in three thematic sections: education, research and technology transfer. Each section contains a short introduction of the relevance of the subject and gives practical tips on how higher education institutions can foster the inclusion of renewable energy at their own institution. The tips are supplemented by practical experiences that have been made by the JELARE partners during the project implementation. It is hoped that these recommendations will inspire many other universities in Latin America and Europe to place more emphasis on the important topic of renewable energy in their academic activities.

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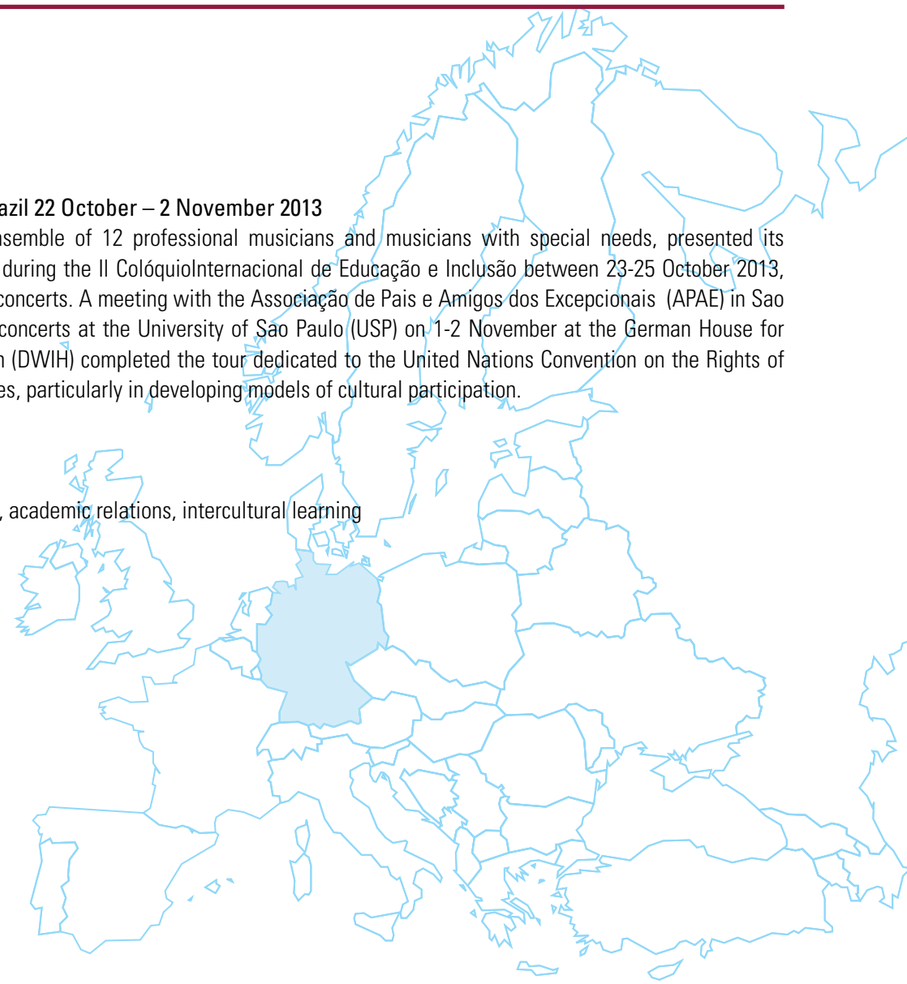
Music and Inclusion. Steps towards an inclusive society in Europe and Latin America, Technical University of Dortmund, Germany

Irmgard Merkt

Summary

Piano inclusive **in Brazil 22 October – 2 November 2013**

Piano inclusive, an ensemble of 12 professional musicians and musicians with special needs, presented its programme at UNIRIO during the II ColóquioInternacional de Educação e Inclusão between 23-25 October 2013, giving workshops and concerts. A meeting with the Associação de Pais e Amigos dos Excepcionais (APAE) in Sao Paulo and performing concerts at the University of Sao Paulo (USP) on 1-2 November at the German House for Science and Innovation (DWIH) completed the tour dedicated to the United Nations Convention on the Rights of Persons with Disabilities, particularly in developing models of cultural participation.



Key words

Music, social inclusion, academic relations, intercultural learning

Piano inclusive in Brazil 22 October – 2 November 2013

The cooperation of many institutions and activities brought the ensemble piano inclusive to Brazil in order to present a model of cultural participation and to discuss the practice of building an inclusive society according to the United Nations Convention on the Rights of Persons with Disabilities. The project was organised as follows:

1. The UAMR, University Alliance Metropolis Ruhr formed by Ruhr University Bochum, TU Dortmund University, and the University of Duisburg-Essen in the Ruhr-Area, Germany, runs academic liaison offices for North America, Latin America, and Russia, to widen the academic relations within a global network. The head of the Latin-America-Office in Rio de Janeiro and Sao Paulo is Prof. Dr. Christoph Käppler, TU Dortmund University, Faculty of Rehabilitation Sciences, the office is run by Dr. Stephan Hollensteiner.

2. The Federal State of North Rhine Westphalia in terms of the governor's department and the Ministry of Work, Social Integration and Welfare. The Ministry, supporting the development of an inclusive society, enabled the project Dortmunder Modell: Musik (DOMO: Musik) during the years 2010-2013.

3. DOMO: Musik was headed by Prof. Dr. Irmgard Merkt, TU Dortmund, Faculty of Rehabilitation Sciences. The project aimed at gaining the experience in educational models, musical-artistic models, as well as structure and organization modes of working together with professional musicians. Finding out more about mechanisms that hinder inclusion was meant to be as important as providing examples of good or best practice.

4. The German House of Science an Innovation (DWIH) in Sao Paulo supports scientific activities in international cooperation.

5. A module consisting of the Deutschland + Brasilien 2013-2014 year. This activity is to intensify the relations between Brazil and Germany in many respects such as politics, economy, culture, education, science, sustainable development, sports, etc.

Piano inclusive in Rio de Janeiro and Sao Paulo

Between 23-25 October 2013 one of the main events of the opening ceremony of the conference II Colóquio Internacional de Educação e Inclusão was dedicated to signing a contract between UNIRIO and TU Dortmund to strengthen further research projects in the field of inclusive education, an area that still lacks a lot of scientific foundation. The Memorandum of Understanding was concluded by the rector of the Universidade Federal do Estado do Rio de Janeiro, Prof. Luiz Pedro San Gil Jutuca. Parallel to the lecture on music and inclusion, given by Prof. Merkt on behalf of the conference, the ensemble prepared the first warming up and a workshop for students and the participants of the conference ran by Claudia Schmidt, the leader and conductor of the ensemble. The participants were instructed how to build a choir for everyone and the first concert generated standing ovations and made the Brazilians audience dance.

Visiting APAE in Sao Paulo, got the Germans dancing, when received by APAE`s Banda together with the dancing puppets. A concert at the University of Sao Paulo (USP) and the final performance at the German House for Science and Innovation (DWIH) were compelling, both in musical and conceptual aspects.

The whole visit was documented and the audiovisual resources were uploaded in December 2013 on our website. http://www.fk-reha.musik.tu-dortmund.de/cms/de/DOMO__Musik/index.html

Conclusion

Inclusion by arts is not only an artistic activity but also an academic field, in which high academic institutions should face their responsibility to prepare students to build an inclusive society. A project like the visit of *piano inclusive* to Brazil shows the importance of sensorial and intercultural experiences through performance elements as workshops and concerts in order to evoke deeper discussions on the quality of inclusive cultural projects. To discuss the conditions and quality of inclusive projects is a genuine academic issue. This is what the project aimed to achieve. It is expected that through bi- or multilateral cooperation this recent topic will be taken into account in further comparative studies and research.

The two-week tour was an inspiration to many people. The exchange of experiences and the discussions about barriers for inclusion and conditions are to make inclusion and participation possible. Comparative studies on the effects of public presence of persons with special needs in the field of arts, especially in music, can be continued in international collaboration.

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Training of university lecturers at National University of Costa Rica in competency-based learning and testing, University of Münster, Germany

Frank Dellmann
Gerardo Jiménez Porras

Summary

Competency-based learning and testing is one of the major issues throughout the didactic circles in Germany. For many years, this didactic concept has been implemented at the Faculty of Business Administration at Münster University of Applied Sciences. According to empirical results (Pankow 2008, Heidenreich 2011), employers expect that graduates of a study programme should not only possess professional but also methodical, social and personal competencies. To prepare students for a successful professional career, a shift from teaching to learning is necessary. According to Biggs (1996), coherence between learning outcomes, teaching and testing should be intended through constructive alignment. Based on the close relationship between the Universidad Nacional of Costa Rica and Münster University of Applied Sciences since 2001, training of the Costa Rican colleagues is realized during a 6 month stay. The workshops helped to create an awareness of the need to shift towards more learning oriented study plans and specific courses, at the same time allowing participants to start redesigning their didactic concepts of the courses accompanied by an ongoing coaching process.

Key words

Competency-based learning, competency-based testing, learning outcomes, constructive alignment, training of university lecturers

Introduction

The objective of this paper is to present the experience of a competency-based learning and testing workshop conducted by the first author at the Universidad Nacional of Costa Rica (UNA) within the frame of collaboration between the Faculty of Business Administration at Münster University of Applied Sciences (MUAS) and the Universidad Nacional of Costa Rica.

In 1999, the Faculty of Business Administration at Münster University of Applied Sciences established the German-Latin American study programme of Business Administration CALA (Carrera Alemana-Latinoamericana de Administración) which is a double Bachelor degree programme with 9 associate universities in Argentina, Brazil, Chile, Colombia, Mexico, and Costa Rica. The relationship with the Universidad Nacional of Costa Rica in Heredia started in 2001, and the double degree programme was stipulated by a cooperation agreement in 2002. The students of both institutions commence their studies at the home university and complete it with a 3-semester stay abroad including a 20 weeks internship at a foreign company or institution. The objective of CALA is to prepare its students for a profession in an internationally operating company with a strong focus on Latin America. In addition to the regular curriculum of a study programme in business administration, students are thoroughly prepared at MUAS in language, culture, politics, history, geography, law and ecology with a Latin American focus. This preparation, combined with the experience during their long stay abroad, enables students to not only achieve professional competencies in international management but also intercultural and other social competencies which are very important for their professional life.

Based on this close relationship between UNA and MUAS, the dean of the Faculty of Social Sciences of UNA, Carlos Buezo, Ph.D., invited the first author to conduct a training programme for university lecturers in didactic concepts and quantitative methods. The training is aimed to enhance the quality of teaching by motivating the lecturers to apply new didactic concepts and has been realized in several workshops at the Centro Internacional de Política Económica para el Desarrollo Sostenible (CINPE), directed by the second author, and at the Faculty of Social Sciences. Training was conducted during a 6 month stay of the first author in Costa Rica, financed by DAAD (German Academic Exchange Service), UNA and MUAS. The majority of the workshops have outlined the didactic concept of competency-based learning and testing which is described briefly in the next section. The motivation for and the objectives of the training are presented in section 3, followed by the process and experiences made in section 4, and an outlook to further possible activities in the last section.

Overview of competency-based learning and testing

Competency-based learning and testing is one of the major issues throughout the didactic circles in Germany (see websites of Bündnis Lehren and Stifterverband für die deutsche Wissenschaft). According to empirical results (Pankow 2008, Heidenreich 2011), employers expect that the graduates of a study programme should not only possess professional but also methodical, social and personal competencies, subsumed by the term key competencies. To prepare students for a successful professional career the didactic concept should focus on the facilitation of professional and key competencies. Besides, with additional courses for specific key competencies like “Presentation techniques” or “Introduction to scientific methods” professional and key competencies may be developed in an integrated way. The requirements of the employers induce the necessity for the facilitation of the students’ competencies to become the centre of the teaching, rather than the content provided by the teacher. Therefore, a shift from teaching to learning is necessary where the role of the lecturer changes from being a teacher as a “knowledge provider” to a coach supporting the learning process of the students. Consequently, in the following the term teaching / learning is used to illustrate this shift.

The term competency has been defined by many authors (see Cano 2008 for an overview in Spanish, or Whiddett / Hollyforde 2003). In a project of developing competency-based learning as a didactic concept at the Faculty of Business Administration at Münster University of Applied Sciences the definition of Van der Blij et al. (2002) has been very useful:

"Competency is defined as the ability to act within a given context in a responsible and adequate way, while integrating complex knowledge, skills and attitudes".

It is important to realize that in this definition competency is related to actions and focused on the integration of knowledge, skills and attitudes. This means that a person who applies his knowledge and skills without attitudes does not act competently on the basis of this definition.

In the structural model of Orth (1999), it is differentiated between professional, methodical, social and personal competencies. Professional competencies are referred to the content of the academic discipline needed for the profession. Methodical competencies are needed to systematically work on the solution of problems within the profession like generating and processing information or analytical thinking. The way of communicating and cooperating with others is the main area of social competencies. Personal competencies are related to self management and include objective-orientation, structuring one’s own work and disposition to ethical behavior.

Learning outcomes (Kennedy et al. 2006) describe competencies as results of the students’ learning process. They should fulfill the following criteria:

- Specific and concrete formulation
- Revisable to evaluate them in a testing format
- Use of verbs related to actions
- Realistic to achieve
- Coherence:
    - Internal: Relation between the learning outcomes among themselves
    - External: Relation between learning outcomes of a course and earning outcomes of the study program
    - Integrated: Relation between learning outcomes, teaching/learning format and testing format

When formulating learning outcomes it is important to take into account the perspective of the employer and the needs of society with respect to the question what the graduate can contribute to society. Furthermore, the learning outcomes should be related to the four types of competencies according to the model by Orth (1999).

Learning outcomes can be related to the taxonomy of learning objectives of Bloom et al. (1956) who ordered learning objectives, beginning with the lowest level: knowledge, comprehension, application, analysis, synthesis, and evaluation. It is possible to assign verbs to each of these levels used in the formulation of learning outcomes to clarify the intended level. This also helps to place the learning out-comes of a course in the curriculum of a study programme.

According to Biggs (1996), coherence between learning outcomes, teaching and testing should be intended through constructive alignment. This relates to the integrated coherence criterion of the learning outcomes. Constructive alignment refers to the intention to deduce the teaching / learning format and the testing format in conformity with the learning outcomes. The teaching / learning format should help the students to facilitate the competencies formulated in the learning outcomes, and the testing format should check if the students achieved them at a sufficient level. The consequence is that a (re-)design of a course should start with the formulation of learning outcomes from the employers’ and society’s perspective and continue with the deduction of the teaching / learning and testing format.

Examples of teaching / learning formats may be “minor” elements within a traditional lecture to activate the participation of students like murmuring groups, “think-pair-share” or the use of cognition cards with open questions remained to be answered autonomously and to be used as a good opener for the following session. Re-designing the teaching / learning concept can lead to new concepts like coaching of learning-teams, problem-based learning or the realization of real projects contracted by companies or other institutions who, in fact, are future employers (see Harper / O’Brien 2012, Rózsa 2012).

Bearing in mind that the learning process is more effective when it is self-directed by the student (Gage / Berliner 1998, Schunk 2008), it helps to make the didactic concept including learning outcomes, teaching and testing format transparent to the students. To support the students’ learning process it is important to give constructive feedback in a positive atmosphere. This leads to the insight that formative evaluation methods are often the better way than summative evaluation methods.

Reis/Ruschin (2007) specifies the following attributes of competency-based testing:

- Setting of the tasks:
    - Constructive alignment
    - Application and problem orientation
    - Possibility to review the solution process by the examiner
    - Possibility of autonomously directed, self-structured and intentional solution processes of the examinee

- Evaluation criteria:
    - Standardized and justified differentiation of the performance into competency levels
    - Transparent transformation of performance levels into marks

- Roles of examiner/examinee:
    - Examinee as a colleague or even an expert in the subject area
    - Examiner as an approving peer

This entails a remarkable change in the paradigm of exams usually applied, and illus¬trates the consequential shift from teaching to learning.

The didactic concept described in this chapter has been applied successfully for many years at the Faculty of Business Administration at Münster University of Ap-plied Sciences and is permanently being improved.

Objectives of the training

The Faculty of Social Sciences at UNA has followed a strategy to enhance the quality of university education for many years. On the one hand, the qualification of the university lecturers has been systematically improved by facilitating the participation of lecturers in Ph.D. programme in foreign countries. Even though Ph.D. programme develop strong skills in research methods and specialization knowledge, they are not oriented to develop modern skills required to conduct the teaching / learning process. This implies that the teaching / learning methods applied at most of the courses are reproducing the traditional model, with emphasis on the development of professional competencies.

On the other hand, it has been necessary to enhance the quality of teaching by a di-dactic training of the lecturers. The training is conducted by the first author during a 6 month stay at UNA starting the end of July, 2013.

The main objective of the training has been the motivation to apply the concept of competency-based learning and testing as described in section 2 in the courses taught by the lecturers. Specifically, this means the redesign of existing courses starting with the formulation of learning outcomes from an employers' perspective. On this basis, the teaching / learning format and the way of evaluation shall be deduced in a coherent manner. Finally, the attributes of competency-based evaluation shall be applied.

Another objective in the progress of the workshops has been to animate communication among the lectures about didactic aspects and experiences to finally achieve a closer collaboration in the redesign of their courses.

Process and experiences

The 6 month stay was prepared during a short visit of the first author at UNA 9 months before discussing the needs of the lecturers and conceptualizing the format of the workshops to be offered. At the beginning of the 6 month stay, these concepts were refined and concretized to offer 6 workshops at CINPE. These were announced by the second author to his colleagues sending a short description of the objectives and content of the workshops. Each workshop has been evaluated by written feedback to indicate improvements and expectations of the participants for the next session.

Looking at the experience offered at CINPE, 11 of 17 fulltime and 3 external lecturers attended the workshops. Another 3 fulltime lectures from CINPE attended the workshop offered one month later at the Faculty of Social Sciences, which means from the 17 fulltime lectures from CINPE, only 3 did not attend the workshops, and this was explained by personal reasons. The number of participants varied between 10 and 14 due to travelling to conferences abroad or other commitments. Up to 3 participants attended repetitions of workshops to gain on lost content while they were abroad. Some of the participants asked for deeper insights in learning outcomes and teaching / learning formats in their evaluation, so 2 additional workshops were offered to fulfill these requests.

During the course of the workshops, 7 participants already started to redesign the didactic concepts of their courses, most of them accepting the personal advisory service offered by the first author.

On the other hand, the contribution of all participants provoked a refinement of the concept of the workshops leaving more time for group works and plenary discussions. At other times, the coacher of the workshops suggested some very interesting dynamics (such as role playing games) to reinforce the key concepts, making the learning process more effective. In general terms, the dynamics of the workshops allowed intensive interchange between the participants and initiated collaborative works in the redesign of courses.

The workshops have been evaluated very well by the participants. They have considered the new approach very much constructive and more effective than the traditional teaching methods usually applied. At the same time, the new approach allows for the consideration of additional competencies, other than the mere professional ones.

Furthermore, another 6 workshops, starting one month later, were offered to lecturers of the Faculty of Social Sciences with an almost constant number of 14 participants (3 of them being newcomers from CINPE, as explained before). These workshops have also been evaluated very well, and it is interesting to assert that the dynamics of the second group is very similar to the first with regard to the time for group works and discussions. However, the participants are not so familiar with each other as they belong to different academic units at the faculty.

In the following, some answers of the participants to the question, what was useful in the session, are quoted:

- "Rethink the formulation of objectives taking into consideration the needs of the students as future (or actual) employee."
- "Mental opener to look for/deepen new forms of guiding the learning process of the students."
- "It was useful because it made me realize that I should be less of a controller and more a motivator in the classes."
- "Reinvent my strategy of teaching and learning by competencies putting my focus on the student."

These examples indicate that the workshops initiated a process of change fulfilling the main objective to motivate the lecturers to apply the concept of competency-based learning and testing.

Outlook

The ongoing coaching process in the redesign of courses at CINPE seems to be very fruitful, even though participants are aware of the challenges this process implies. A process of internally organised workshops to collaborate in the redesign of courses and, later on, of study programmes, is intended to be initiated in the last session at CINPE and at the faculty. Also, the possibility of making short videos with the key concepts as developed during the workshops as tools for internal lectures is being discussed, especially for those lecturers unable to attend any of the workshops. This will strengthen the expectation that in future complete study programmes are developed with the new approach. Additionally, a workshop with deans from several faculties of Social Sciences, Economics and Business Administration of Central American universities is scheduled to be offered at UNA at the end of November.

Furthermore, similar workshops are intended to be offered to other associate universities in the CALA network.

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Cooperation between Polish and Latin American academic communities: state of the art and new perspectives, Conference of Rectors of Academic Schools in Poland (CRASP), Poland

Marek Frankowicz

Summary

This article analyses factors contributing to the development of cooperation between Poland and Latin America. Main channels of academic cooperation are presented and some examples are pointed out, such as ERASMUS MUNDUS projects and bilateral initiatives of Polish and Latin American higher education institutions. The growing role of international academic networking is shown; it may give a new impetus for Polish universities in their quest for new cooperation opportunities. It is remarked that Polish experiences in designing and implementing higher education reforms ("Polonia Process") can be helpful for Latin American countries in their higher education modernization agenda. Finally a short SWOT analysis for Polish-Latin American academic cooperation is presented.

Keywords

Poland, Latin America, academic cooperation, Bologna reforms

Introduction

There are many factors which may contribute to the development of cooperation between Poland and Latin America. First, there are over 2,5 millions of citizens of Latin American countries with Polish roots, mainly in Brazil (around 1,8 million) and Argentina (around 0,5 million); but also in other countries of the region there are Polish communities (in Paraguay, Chile, Uruguay and Mexico - of the order of 10,000)[1]. Salient examples of contribution of Polish emigrants to the development of Latin America are Ignacy Domeyko in Chile and Ernest Malinowski in Peru; the first one was in fact a founder of Chilean higher education structures and the other - one of the most prominent engineers, constructor of the highest railway line in the world.

Another factor is steadily growing interest in Spanish language and culture, as well as popularity of Latin American literature. In Poland, Spanish is ranked as the fifth most useful language (after English, German, Russian and French)[2]. The Cervantes Institute started its activities in Poland already in 1994. At present, it has its premises in Warsaw (the largest in the world) and in Krakow.

Last but not least, the accession of Poland to the EU in 2004 opened new possibilities of multilateral and multifaceted cooperation with Latin America, not only on the basis of bilateral intergovernmental agreements, but also via interregional large-scale cooperation programmes.

Academic cooperation - the present day

There are several channels of academic cooperation between Poland and Latin America. In the framework of intergovernmental agreements, in 2012/13 there have been 155 learners from 16 Latin American countries; 143 for degree mobility and 12 for credit mobility. 16 countries[3]. This number remains more or less steady.

Far more developed are inter-institutional cooperation activities between Polish and Latin American universities. They may be sub-divided into education and research cooperation.

As for cooperation in education, several Polish universities take part in ERASMUS MUNDUS exchange projects (for example, EMUNDUS20 - Silesian University of Technology, FELLOW-MUNDUS - Warsaw University, ANIMO CHEVERE - Jagiellonian University in Krakow). There are also several ERASMUS MUNDUS Master Courses with Polish and Latin American participation, such as:

EMQAL (Erasmus Mundus Master in Quality in Analytical Laboratories), with Gdansk University of Technology and Universidade do Sao Paulo,

MITRA (Mediation interculturelle: Identities, Mobilities, Conflits, with University of Wroclaw and Universidade Federal do Rio de Janeiro,

ECOHYD (Erasmus Mundus Master of Science in Ecohydrology), with University of Lodz and National University of La Plata.

[1] Walter W. Gołębiewski, Polish emigration to Latin America, www.zycie-kolorado.com (in Polish)
[2] Wojciech Kajtoch, Rafał Kuś. Status, using and teaching minority and foreign languages in contemporary Poland. Zeszyty Prasoznawcze R. LIV, nr 3-4 (207-208), Kraków 2011.pp 197-212. (in Polish)
[3] Data from Bureau for Academic Recognition and International Exchange

There are also other projects, such as SMILE (Student Mobility In Latin America and Europe) for students of Engineering and Architecture, with AGH University of Science and Technology being a Polish representative[4], and many bilateral agreements enabling for small-scale mobilities between Polish and Latin American universities.

There are mainly three types of research cooperation:

1. Language and culture. Spanish and Latin American studies are present at many Polish universities. Some of them are also specialized in advanced research. For example, at the University of Warsaw there is Centre for Latin American Studies (CESLA), Institute of Iberian and Ibero-American Studies and Centre for Pre-Columbian Research. Research in the Faculty of Philology of the University of Silesia encompasses, inter alia, semantic, cultural and sociolinguistic studies of the influence of indigenous American Indian languages, Quechua in particular, on Spanish spoken there. Faculty of Political and Regional Studies of the Jagiellonian University in Krakow is rapidly developing its cooperation with Peru, Mexico, Colombia and Venezuela on such topics as Church-State relations, migration policies and other important social issues.

2. Several Polish universities are conducting research concerning geography, geology and biology of Latin America. Scientists of the Faculty of Earth Sciences of the University of Silesia do their research at the Colca Canyon and Volcano Valley in Peru. Faculty of geography and Regional Studies of the University of Warsaw is involved in many research activities with Mexico, Peru, Colombia, Ecuador, Argentina, Costa Rica and Cuba.

3. There is growing Poland-Latin America cooperation in other scientific disciplines, such as exact sciences (mathematics, physics, chemistry, astronomy). University of Warsaw has its own telescope in astronomical observatory Las Campanas in Chile.

What is important: there exist a balance between research in humanities and social sciences on the one part and hard sciences and engineering on the other part, therefore one can hope that scientific cooperation can develop smoothly and include all types of higher education institutions and research fields.

[4] cf. the paper by Miroslaw Gajer in the present volume

The growing role of international academic networks

Nobody is an island - at present, more and more attention shall be paid to various kinds of networking activities. Besides large-scale international academic organisations like EUA and EURASHE and national rectors' conferences, there are hundreds of academic networks world-wide[5]. They can be divided into three basic categories: "university clubs" with well-defined objectives and selective admission procedures (such as UNICA, Coimbra Group, Compostela Group and SGroup Network), regional networks (such as Danube Rectors Conference or Baltic Sea University Network in Europe) and thematic networks concentrated on subject areas (like European Chemistry Thematic Network) or important issues (like EUCEN or EADTU). Academic networks of European origin become more and more interested in overseas links by accepting non-European institutions as members and promoting cooperation with other regions. SGroup Network is the unquestionable leader in building bridges between Europe and Latin America (to mention only ALFA and ALBAN projects). Coimbra Group has created Latin America Task Force in 2005 to disseminate knowledge about the Coimbra Group universities and the European higher education in Latin America and support cooperation between Coimbra Group members and partners in Latin America. In 2011 the formal agreement between the Coimbra Group and the Montevideo Group was signed. Compostela Group is the first European "academic club" accepting full members from Latin America (at present 6 institutions from 4 countries). There is also a growing interest in Latin American partnerships among thematic networks; for example, a special November 2011 issue of the European Chemistry and Chemical Engineering Education Network was devoted to chemistry in Latin America, with a Brazilian professor as the guest editor. Polish universities are represented in above mentioned networks and already have profited from emerging cooperation opportunities - inter alia, as partner institutions in ERASMUS MUNDUS projects with Latin America.

"Polonia Process" - possibility of Polish contribution to the theory and practice of academic reforms

Joint research projects and academic exchanges are not only possibilities of "creative cooperation" of Polish and Latin American academic community. There may be also opportunities of fruitful cooperation in the domain of systemic higher education reforms.

The success of the Bologna Process, aiming at creation of the European Higher Education Area, has increased considerably the interest in Bologna-type reforms among non-European countries. At present, the ALFA Tuning Latin America Project: Educational and Social Innovation (2011-2013) continues activities of the first phase of this project carried out between 2004 and 2007 to “fine tune” the educational structures in Latin America. The general objective of the project is to contribute to the creation of a Higher Education Area in Latin America through curriculum convergence. The specific objectives are, inter alia: advance the process of competence-based curriculum reform in Latin America, extend the theme of employability developing graduate profiles linked to the new requirements and demands of society, construction of disciplinary and sectoral frameworks for Latin America, and design a system of academic credits, which can be both accumulated and transferred, that facilitates the recognition of qualifications within the region of Latin American and is able to be linked with systems in other regions.

[5] cf. Handbook of International Associations in Higher Education. A Practical Guide to 100 Academic Networks World-Wide. ACA 2009.

Poland has very interesting experiences in designing and implementing academic reforms. Rapid development of Polish higher education sector in 1990-95, characterized inter alia by the emergence of non-state HEIs and exponential increase of the number of students, resulted in divergences in study programmes, study structures and endangered the quality of education. Therefore – already in the mid-nineties – Polish academic community started to implement, by the "bottom-up" initiatives, some corrective measures, such as promotion of ECTS, introduction of academic accreditation system and harmonization of curricula. Such activities were supported by TEMPUS projects (Poland was the main beneficiary among CEE countries) and participation in a variety of international initiatives (CEE Network of QA Agencies, PHARE Multi-Country projects etc.). The distinctive feature of such "*Polonia Process*" (with action lines very similar to the future Bologna Process) was that it was based mainly on academic self organisations, with limited role of the national authorities. Another characteristic feature was the optimization of solutions developed in TEMPUS partner countries from the EU. After 2002 (creation of the State Accreditation Committee) the influence of the Ministry of Education on academic reforms became more and more dominant. It resulted in some tensions (two co-existing accreditation systems, two HE strategies - one developed on behalf of the Ministry, the other - by the Conference of Rectors of Academic Schools of Poland), but tensions can also be sources of driving forces; on the other hand, Ministry and other governmental structures often based on experiences of bottom-up academic initiatives. For example, introduction of National Qualifications Framework for Higher Education, which took place in last two years, was a real success; it was driven and financed by the Ministry, but organized mainly by Bologna Experts and other HE experts with experiences dating from the "*Pologna Process*" period.

At present, Polish higher education can be best described as a "complex adaptive system" in which top-down and bottom-up initiatives are mutually influencing each other, and a kind of "self-consistent field of HE" is emerging. One can identify in its development some analogies with similar phenomena occurring in other European countries, however, the impact of self-organisation of academic community (in particular - disciplinary structures, such as deans' conferences) is in a way unique and may serve as an example of good practice for other countries. However, there is a caveat that the growing role of governmental factors will lead to ritualization of conducts and to fading of the sense of ownership of academic reforms among Polish academic folk. So Poland can be regarded as a "laboratory of academic reforms" and Polish academic community is vitally interested in exchanging experiences with other reform-oriented communities.

Final Remarks

Let us look at the academic cooperation between Poland and Latin American countries by means of the simplified

STRENGTHS	WEAKNESSES
• Existing bilateral contacts at various levels (rectors' conferences, universities, research groups) • Diversity of research areas of mutual interest • Interest in Latin American culture in Poland	• Lack of coordinated promotion of Polish higher education in Latin America • Scarcity of national and institutional financial resources (cooperation too much dependent on external funds, such as Framework Programmes and EU-supported educational projects
OPPORTUNITIES	**THREATS**
• Polish diaspora in Latin America • EU initiatives, Erasmus+ • Accession of Poland to Science without Borders Program	• Lack of consistent cooperation policy at country level, insufficient funding of cooperation • Globalization of education, MOOCS

SWOT analysis:
There are some factors which may have both favorable and adverse effects on Poland – Latin America cooperation. One of such factors is rapid development of MOOCS; on the one hand, MOOCS means education breaking spatial barriers, which is important for regions which are far apart. On the other hand, it is not sure if Polish universities will be competitive enough to become visible among other education providers which may have more resources and better promotion strategies. Therefore it is important to enter various strategic alliances and maximize benefits of Polish presence in international academic networks.

Among new initiatives which could be put forward one can propose to organize a country-wide web-based academic information system on Poland-Latin America academic cooperation, including a "pool of good practices". One shall also consider intensification of cooperation in such key areas as social role of universities ("third mission"), sustainable development, knowledge transfer and institutional capacity building.

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Heading to a European-Latin American model based on knowledge, Spanish Rectors' Conference (CRUE), Spain

Antonio López Cabanes

Summary

Spanish universities have a key role in the approach between European and Latin American Higher Education Systems. The historical cultural, political and social links between both regions prove the convenience of creating closer ties, improving the recognition of studies policies and advancing towards the construction of a Transcontinental Space of Knowledge, supported by the experience of the EHEA and the different agreements of regional accreditation in Latin America.

Temporary factors such as the economic recession cannot stop the internationalisation of Spanish universities. Governmental, academic and institutional operators and operators of the production sector must believe in this and work to prevent the situation. If it does not want to miss development opportunities, the Spanish University System must be sufficiently attractive to retain and attract talent, apart from continuing to go in depth into the relationships with Latin America, which in most universities are very solid, above all in the postgraduate section.

key words

International relations, recognition, qualifications, talent attraction, agreements.

Latin America is nowadays a key region in the world geopolitical and economic map. In Spain, there is an emergence of initiatives – in all areas and sectors- which tend to create closer ties, and on many occasions to establish new ties with Latin American countries.

Spanish universities have for years been promoting common spaces between both regions, with the ultimate and main aim of constructing an Ibero-American Space of Knowledge. This initiative, with institutional support, was developed within the framework of the *XVth Ibero-American Summit of Heads of State and Government* which was held in Salamanca, Spain, in October 2005, whose purpose was the necessary transformation of higher education, and articulated around research, development and innovation, as conditions necessary to increase international competitiveness. Apart from the ongoing proposals, there is a consolidated co-operation structure between both regions, in which entities such as Universia, the Ibero-American University Council (CUIB), Inter-University Development Centre (CINDA) or the Postgraduate Ibero-American University Association (AUIP) play a determinant role.

Key moment for the impulse of networks

Spain is an extraordinarily relevant performer in the European-Latin American region, due to the great advantage of having a common identity, mainly based on language. The link between Spain and the Latin American countries is supported by a historical strength, and the understanding between societies which makes Latin America the natural space for Spanish internationalisation, both of universities and of companies, institutions, etc.

Latin America undergoes a decisive historical moment. While Spanish economy has been decreasing for years, many Latin American countries are registering good growth indicators – the growth rate of the region represents 10 % of the world GDP-[1]. Furthermore, according to a recent report produced by the World Bank, the middle class in Latin America experienced a 50 % increase in the first decade of this century, from 103 million people to 152, in spite of the global economic crisis.

The good development of this indicator is an example of how this region has experienced in the latest years dynamism and a sustained growth, with deep socioeconomic and political changes as a background in most Latin American societies.

For Spain, with a governmental policy which cuts down public expenses, the present moment is extremely complicated. The country must continue being the strategic partner of the great Latin American promise, which has a historical opportunity. There is no doubt that in the global environment in which we move, the value depends on talent, the capacity to innovate and the management of human resources of society, which will be capable to generate products and services of a high qualification and specialisation.

[1] According to the Inter-American Development Bank (IDB)

Spanish universities are aware that many of the problems that urge Spain nowadays come from an unsuitable management of knowledge, as the main value of globalised economies. Therefore, and as institutions that are at the service of society, they have the challenge not only of generating and retaining talent among young people, also of having the capacity to attract them from outside, as a key strategy to construct a competitive society based on knowledge and innovation. The Spanish University system is doing its best to achieve that both governors and the social and production sectors go firmly for education, research, innovation and transfer, while competing so that the Spanish University system is attractive for Latin American young people who are highly qualified and provide an undeniable value beyond the national vision.

Initiatives and agreements with Latin American Universities

The need to construct a common space of knowledge is shared, as the advantages that mobility provides universities favor the academic and scientific possibilities of the countries at both sides of the Atlantic and improve the quality of higher education. To this regard, the experience in the design, management and strength of the European Higher Education Area, can be decisive when constructing that transcontinental space.

In Latin America, with the extension of the urban class, there has been a growth in the number of students in the latest times. In total, between 1994 and 2003, there was an 83% increase in the number of enrolled students, and the 15 million Latin American students in higher education in the year 2005 have been exceeded[2]. This has given way to an increasing improvement of quality in some Ibero-American institutions of higher education. In the 2013 Academic Ranking of World Universities (ARWU), you can find universities of Mexico, Brazil and Argentina among the first 200.

In the latest years, Spanish Universities are reinforcing the solid relations with many Latin American Universities, with which more and more the mobility of students is being promoted by bilateral conventions between universities – mostly in postgraduate courses and doctorates, these last ones to a lesser extent, favouring the work in networks, developing joint programmes and increasing co-operation with companies of the areas of science and technology.

There are many initiatives being led by Spanish University in order to build bridges towards Latin America, such as the intergovernmental initiatives in which universities take part, for example, different projects of the Alfa Programme of the European Commission, the programme Science without Borders of the Brazilian government, the Ibero-American Programme of Science and Technology for Development – CYTED-, the programme of postgraduate academic mobility Pablo Neruda, Ibero-American Programme on Industrial Property and Development Promotion, the Ibero-American Programme on Innovation or the Ibero-American Programme on Institutional Co-operation for the Development of Small and Medium Enterprises (Iberpyme), among others. Additionally, Erasmus Mundus is a programme funded by the European Commission, for the mobility and co-operation through joint programmes and consortiums with countries not belonging to the European Union, in order to promote the European higher education system and the dialogue with countries of other environments.

[2] According to the information handled by UNESCO's International Institute for Higher Education in Latin America and the Caribbean (Iesalc) in the "Report on Higher Education in Latin America and the Caribbean 2000-2005".

Apart from the hundreds of co-operation agreements and joint titles that Spanish Universities keep with Latin American Universities and education institutions, they are also leaders of a series of specific programmes for co-operation which are worth pointing out, at least a minimum part of them. Thus, for example, a Spanish University co-ordinates an Erasmus Mundus project in which 6 European universities and 13 Latin American ones take part, and which promotes nearly 200 mobility scholarships between both regions. Spanish faculties lead specific Mobility programmes with Latin America; and there are several scholarship programmes for stays in Spanish universities given to students or researchers from Ibero-American countries.

Specific networks from concrete areas of knowledge are also led from Spain, such as a summer school of joint investigation with Latin American universities, a programme for the exchange of engineering students among the most outstanding technical universities of Europe and Latin America, or a co-operation project in the field of Archaeology.

In order to promote mobility and to make research and teaching easier with regard to the different social, cultural, economic and political areas which characterise Latin American countries, there are universities that have created Ibero-American Institutes or Centres for Latin American Studies. On the other hand, online training is increasing throughout the world and the possibilities offered by the new technologies for teaching and learning continue to grow. Spanish distance learning universities keep agreements with Latin American institutions and universities of the technological sector for the creation of digital communities or virtual mobility programmes and scholarships.

There are also Exchange Programmes between Conferences of Rectors, which can be followed by the Spanish Universities that wish to do so, in order for students to be able to perform a study period in the other country with a guarantee of academic recognition, for example the one existing between the CRUE and the National Association of Universities and Higher Education Institutions (ANUIES) of Mexico.

Institutional recognition and trust, key factors

Institutionally, the Spanish government has active agreements with Latin American countries with regard to higher education, among which we can point out the "Agreement for the mutual recognition of titles and academic degrees of university higher education" between the Government of the Kingdom of Spain and the Government of the Republic of Colombia and the Government of the Republic of Argentina, signed in Mar del Plata on the 4th December 2010, which is still not in force, and the "Memorandum of Understanding between the Spanish Ministry of Education, Culture and Sport and the National Council for Scientific and Technological Development of Brazil", signed in Madrid on the 20th February 2012. Besides, Panama and Mexico have been proposed the signing of a Titles Agreement[3].

This is the key factor for the final impulse of a Space of Higher Education in Latin America, which provides the mobility of talent and relaxes bureaucratic requirements, with the ultimate purpose of promoting the transfer of knowledge.

Currently, the homologation of titles in Spain grants official validity to higher education titles obtained abroad, in a

[3] According to the information provided by the International Relationships Area of the General Secretariat of Universities of the Ministry of Education, Culture and Sport of Spain.

way they have the same effects (academic or professional) of the Spanish title or academic degree to which they homologate. This homologation, which depends on the Spanish Ministry of Education in the case of the Degrees and on universities in the case of Masters, is only necessary when you want to practise the profession in Spain, and you have a title from a country external to the educational systems of the European Union; or when the student has performed secondary studies in another country (except for the European Union or China) and wants to gain access to Degree studies in a Spanish university, in which case the secondary education title must be homologated. With regard to the access to Spanish postgraduate studies of students not belonging to the European Higher Education Area, they can gain access with no need to homologate their tiles. The receiving University is the one that must check that these titles prove a training level equivalent to the corresponding Spanish university titles.

The validation of studies, on the other hand, is the official recognition of validity, for academic purposes, of higher education studies performed abroad, which allow continuing the studies in a Spanish university. The effects of the validation of partial studies, which corresponds to the Spanish university in which you wish to study, are only academic, as they allow continuing studies within the Spanish educational system.

There is a lot to be done to advance towards a more effective University co-operation, which provides access to Higher Education Systems in both regions, in favour of some societies whose production model is based on Higher Education and innovation.

We are sure that projects such as Alfa PUENTES, apart from improving European-Latin American relationships, will help modernising and above all harmonising the higher education systems of both regions, helping us to know each other and to construct and improve mutual trust in educational quality between regions, fundamental element to finally encourage the recognition of studies and the internationalisation of our systems.

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In the area of quality management in the University, he has started up processes for the internal and external evaluation of qualifications for their accreditation and improvement, together with quality assurance systems which allow those evaluation processes.

He is evaluator and auditor of qualifications and quality systems, and of ISO 9001 and Model EFQM, co-operating with several university evaluation agencies, national and autonomic, and other non university organs.

He has given training on quality in the University and in Non University Centres, and in non educational areas; for example, we can point out the ones regarding the performance of self-evaluation and the elaboration of improvement plans.

He has published several books and he is the author of several articles published in magazines and communications presented to Congress, having been invited to take part in several Congresses and Lectures on Quality Management in university and non university Education.

Internationalisation of Higher Education Institutions: challenges and lessons learned from academic mobility between Europe - Latin America, University of Porto, Portugal

António Marques
Barbara Costa

Summary

Internationalisation process carries multiple challenges hence the purpose of this article is to provide an overview of the most common ones encountered in the cooperation with Latin America (LA) within the Erasmus Mundus partnerships. Various solutions to questions such as recognition of studies, organisation of mobility, social integration, or employability have been identified as a result of the experiences gained over the years of implementing the EU-funded academic mobility. The authors did not attempt to provide "one fits for all" solutions but to present a practical overview of conditions to be taken into consideration for successful EU-LA mobility flows and to point to prospective solutions to overcome some of the some of the challenges.

Key words

Organisation of academic mobility, cultural and language training, recognition of credits, fostering student employability

Different levels of institutional development

In Latin America (LA), as it happens throughout many other regions in the world, there are different stages of institutional development of HEI's with regards to the international collaboration. This is due to diverse organisational structures, funding opportunities, regional or national policies etc. One of the most pertinent measures to be applied with the aim of reducing the discrepancies is to strengthen the support for the existing structures of less experienced partners through training of human resources and capacity building activities in international affairs. This is not an easy task, as it requires financial and institutional support from the HEIs' governing authorities. One of the common challenges encountered in LA are technological constraints and low access and/or quality of internet connection. These constraints still limit many LA HEIs' ability to implement strong international cooperation. Such limitations cannot be overcome at HEIs' level due to lack of internal resources. A more regional approach is required, with the involvement of national authorities and other relevant stakeholders.

In some LA universities there is still a need to create new structures dedicated to internationalisation while other HEIs might only need to adapt the existing services and to accommodate new global demand of increasing mobility flows of students or university staff members. In order to improve HEIs' management capacities, the exchange of administrative staff should be encouraged to facilitate the transfer of know-how. Academic staff mobility and increased involvement of incoming students can positively influence the quality of teaching. One of the best practices implemented in several Erasmus Mundus projects is the organisation of training weeks with the participation of HEIs from all LA partner countries in close collaboration with EU institutions. The participating institutions can benefit from the exchange of good practices that can be further multiplied and consolidated in their internationalisation strategies. Indeed, some very experienced HEIs in LA can serve as examples of successful cases whose experience can be multiplied through training courses provided to their less experienced peers, thus leading to the enhancement of their internationalisation strategies. In this particular case, the intra-regional cooperation may constitute a good solution for a multiplication of the expertise to enhance international co-operation.

Sustainable collaboration with LA can also be affected by multiple conditions that should be included in the co-operation strategies. It should be noted that Latin America as a region is composed of diverse higher education traditions and systems. In addition, there dynamic economic, social, and political changes taking place across LA, thus affect priorities with regard to education and research. This can lead to delays in decision making processes. As a result work methods and procedures in the mobility programmes should make special provisions to mitigate the external conditions.

Social Integration measures of mobility students

Another relevant challenge in terms of international cooperation is the need to cope with the cultural integration resulting from different social backgrounds, educational systems, languages etc. in order to accommodate to living and study experience in a host country. Despite it being a challenge to host universities, it can also be seen as an opportunity to promote mutual understanding and to increase awareness of different cultural contexts. Therefore students, researchers and even staff may be encouraged to go through a mobility experience outside their "comfort zones" in terms of the choice of the study location or the language of instruction. In order to ease the implementation of a mobility scheme it is crucial to establish beforehand necessary conditions for mobility, especially to balance inequalities in the educational systems between some LA HEIs. It is important to jointly create procedures, documents and deadlines to support the mobility and to monitor and support students during the mobility flow and afterwards in the post-mobility phase, which are an important quality assurance measure and a founding block of the successful mobility experience.

Another challenging issue is the need for skills assessment and cultural orientation of candidates for mobility programmes provided by home institutions. This may involve the organisation of mobility preparatory events before the students, researchers and staff's departure for mobility and even interviews (in the case of students) to see if the exchange candidates have necessary capacities to face some of the most common obstacles encountered in a foreign country to prevent cases of drop-outs due to early setbacks.

The development of HE teaching and also learning capacity is very much linked to language command. In order to achieve a successful implementation of the mobility flows it is crucial to ensure that students are not negatively affected by their insufficient language skills. Language proficiency in at least one foreign language is indispensable not only for the accomplishment of academic goals but also for the students' full integration in a different country. In LA the language proficiency is often reduced to Spanish and Portuguese, the countries' official languages and their local dialects. Consequently, training courses and capacity building for LA students and staff in language skills can influence study choices to other EU countries beyond traditional Portuguese and Spanish links to study in other langauges such as English, German, French or even less common languages spoken in Europe. Language courses should be delivered extensively as a part of the preparation of outgoing students, including e-learning to reach out to the most remote regions in LA. In order to be truly successful, such a change must be facilitated by each of the LA countries' national authorities and incorporated at LA HEIs. Successful mobility flows are largely conditioned by linguistic skills thus integrated approaches to improving language capacities can broaden study offers and prepare students and academic staff better for an international experience.

Recognition of credits

Those involved in international cooperation, regardless of the region, are fully aware of the challenges related to the recognition of credits for non-degree seeking or degree seeking candidates due to complicated and bureaucratic procedures. In the recognition process it is crucial to provide students with all the necessary information concerning their mobility and also ensure the implementation of the necessary tools to ensure a successful organisation of the mobility. In case no such tools are in place, the LA HEIs may look into the examples coming from other LA HEIs, more experienced in academic mobility with Europe or even into the ECTS tools implemented in Europe.

One of the proposed solutions worth highlighting is the preparation of a detailed Course Catalogue containing information about the courses offered and also the credits recognition mechanisms. It is crucial to have these mechanisms clearly defined and implemented before the mobility starts. This will be the first step towards the mobility. At a later stage, after the application is submitted and approved by the host institution, it is necessary to set up and sign the Learning Agreement listing the proposed courses to be taken, respective number of credits or teaching hours and information on the full recognition of subjects in case the student obtains a passing grade. To establish a course unit (subject) value in terms of credits/teaching hours is of the utmost importance for the recognition process.

It is common to see in LA different institutions using different credit mechanisms. The best way to overcome this challenge is to create a comparative framework combining the different grading/credits systems so as to allow their full understanding. This table presents the credits and grading systems of the different Higher Education Systems in LA and allows a more accurate interpretation of the results achieved by the students. LA HEIs must agree on the fact that credits promised during the preparation of the mobility must correspond to the number of credits recognised upon the return to the home institution. This is based on mutual trust among the institution which is one of the main pillars of the international cooperation. The signature of Memorandum of Understanding (MOU) is sometimes the way to ensure all institutions accept this full commitment.

The following step will be once the mobility finishes and the process of academic recognition is initiated. In order to be able to successfully complete this phase, host institutions need to issue a Transcript of Records containing all the courses effectively taken, number of credits achieved or teaching hours attended and grades obtained. This document, together with the signed learning agreement constitutes the basis for the formal academic recognition. Improving or creating credit and recognition mechanisms is vital for the successful implementation of mobility programmes, and as such for the HEIs internationalisation process.

In order to facilitate the process of the recognition of credits, work meetings between those responsible for the internationalisation of LA universities and between local structures should be encouraged in order to develop mobility agreements that institutionalise credit recognition. Also staff meetings and staff training courses are decisive to allow for the exchange of experiences, procedures and tools to support the international mobility, thus ensuring the recognition of international studies and training abroad. Similarly, the mobility of teaching staff is crucial for understanding the higher education trends in the world regarding the curricula development e.g. teaching methods, recognition of credits and courses taken outside the country. This process is no longer based on a strict correspondence of the contents of the instruction but also considers the relevance of promoting a complementarity of studies.

Employability of students

In LA a need to prevent brain drain has been identified. This is very much linked with the need to create favourable conditions for the high qualified students to return to their home countries and to manage the students' expectations vs. the real accomplishments upon completion of the mobility. The first step towards this important goal is to adjust the mobility to the local job market demands, bringing together universities and enterprises to promote the development of highly qualified and trained employees in LA. By acknowledging the priorities of social development and reduction of poverty employment opportunities should be considered at all levels of the international collaboration in higher education. For example, UNIPRISE has been created with the objective of promoting local and regional development through the employability of students in their home countries after the mobility experience. In order to achieve the social standards, a special attention should be devoted to particularly vulnerable persons, especially women, disabled and ethnic minorities. UNIPRISE is intended to be a network of universities and enterprises created and implemented by the University of Porto (U.Porto) within the framework of the Erasmus Mundus – Action 2 Programme (EMA2). It is designed to promote job offers or internship opportunities upon completion of an exchange experience abroad.

International visibility

The guiding principle behind the successful LA-EU collaboration should be a win-win situation that results from a two-way mobility and reciprocity in academic relations. Up till now the mobility programmes were available mostly from LA abroad which did not allow for EU partners familiarize in detail with a diversity of LA higher education systems. Our experience shows that it is recommended to promote the knowledge and image of HEIs from LA in other regions of the world, thus contributing to strengthening of its image and to reducing misconceptions about LA HE systems among students, staff and researchers in Europe. This issue must be addressed in a proactive manner so that any given stereotypes on LA countries do not affect the cooperation opportunities.

Sustainability of the international cooperation

Supporting sustainable relations is a key for the stability and continuity of international cooperation. Building bridges at institutional level will allow for an increase in the HEIs' visibility and attractiveness beyond their own borders. The cooperation links should be encouraged to continue after a specific action or a project terminates with the aim to integrate and consolidate institutional collaboration. LA and EU HEIs can join together and create new networks of contacts that may contribute to promoting joint courses, boosting the recognition of degrees, developing joint scientific projects and joint degrees and increasing the number of mobility flows (outgoing and incoming). However, there is a significant mismatch of financial resources available in EU and LA to sustain the collaboration in education in research, which poses an additional challenge for planning sustainability measures.

Benefits of LA mobility opportunities

Following the experience achieved under EMA2 projects, one can identify other relevant common obstacles to all LA countries that should be clearly addressed in a policy towards the development of LA international cooperation: low standards of secondary education; insufficient human, technical and financial resources; insufficient R&D investment; strong predominance of undergraduate programmes. Despite the constraints and challenges encountered, the experience gained from the last 20 years of the EU HEArea allows us to envisage the creation of a strong and very influent LA HEArea in the near future.

However, the most recent collaboration in mobility programmes leads to the conclusion that a significant improvement in the quality of EU-LA has been achieved such as the improvement of competences and capacity building strategies, linguistic and other skills development, intercultural experience which as a strong impact both at personal and professional levels. Exchange students, researchers and staff also have benefitted strongly from knowledge and practice sharing, professional development perspectives, the functioning of higher education systems in the respective regions.

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António Marques is the Vice-Rector for International Cooperation of the University of Porto, Portugal since 2006. He is now the Project Coordinator of 8 Erasmus Mundus Action 2 projects, 4 of which for Latin America and the other 4 for the ACP countries. Prior to this he held positions in higher education and research at international level: he was elected in 2008 as Deputy Board member of the International Association of Universities - IAU and he joined the Board as full member in June 2011 for the reminder of this Board's term of tenure in late 2012; and he was the President of EGREPA – the European Group for Research into Elderly and Physical Activity - from 1999 to 2002. A Full Professor at the University of Porto where he got his PhD in Sport Sciences in 1988, he was Visiting Professor at the University of São Paulo, Brazil from 1998 to 2005.

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Barbara Costa is Erasmus Mundus Action 3 Project manager at the University of Porto. She has been working in the international relations in higher education since 2000. She specialises in developing strategic partnership Latin America as well as African, Caribbean, and Pacific countries. Over the past years she has specialised in the implementation of academic mobility through EC-funded projects such as EuroBrazilian Windows I and II, Mundus 17, Mundus ACP I and II involving a total budget of 22 million euros. She supervises mobility flows and legal framework for university collaboration with overseas countries.

Role of university networks in building sustainable partnerships for enhanced EU-LA collaboration, SGroup European Universities' Network, Belgium

Wioletta Wegorowska

Summary

The article features the importance of providing sustainability plans to programmes funded by the European Commission to enhance relations higher education institutions from the European Union and third country partners, more specifically with Latin America. A special emphasis has been placed on the role of university networks in the process of identifying good practices and mechanisms of the transfer of knowledge. SGroup European Universities' Network, whose links with Latin America have been built over the past 10 years through the EU initiatives such as AlBan, Erasmus Mundus or Alfa Programmes, presents sustainability measures designed to capitalise on the invested human and financial resources to provide continuity to EU-LA relations. The article highlights the role of university networks in shaping policies and trends in higher education to strengthen the academic and research collaboration between the regions.

The SGroup European Universities' Network is a non-for profit association established under Spanish Law in 1989 with a seat in Brussels. It is composed of over 30 modern and internationally oriented universities from 17 European countries and aims to strengthen the institutional capacities of its member universities, to reinforce their internationalisation strategies, and to expand collaboration through strategic alliances and academic mobility within Europe and beyond.

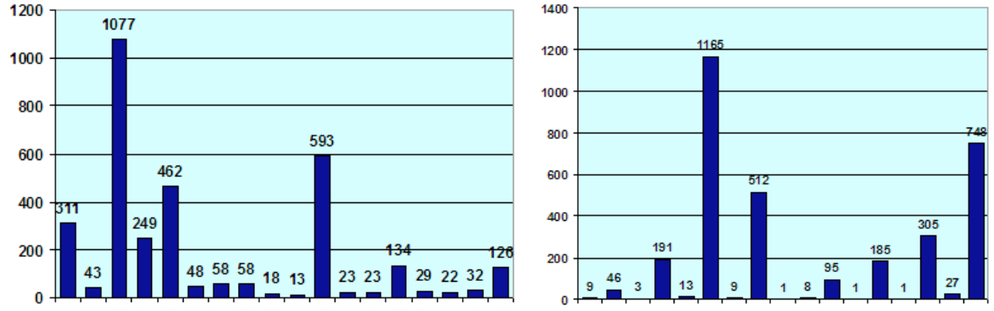
Keywords

Academic mobility, EU-funded programmes, sustainability, university networks

Links of SGroup Network with Latin America

The SGroup Network has collected rich expertise in Latin American collaboration through EU-funded Programmes co-ordinated by the association itself or its individual member universities. Between 2002-2010, SGroup co-ordinated the AlBan Programme of high level scholarships for Latin American students who studied at recognised European universities for their Master and Doctoral degrees or specialisations. The total budget of €109.98 million, with the European Union contribution of €84.65 million enabled to benefit 2471 students from 18 Latin American countries. The most popular destinations in Europe were Portugal, Spain, France, and the United Kingdom, whereas most applications were received from Brazil, Mexico, Colombia, and Argentina.

Fig. 1 The distribution of applications by countries of origin and destination over the five calls

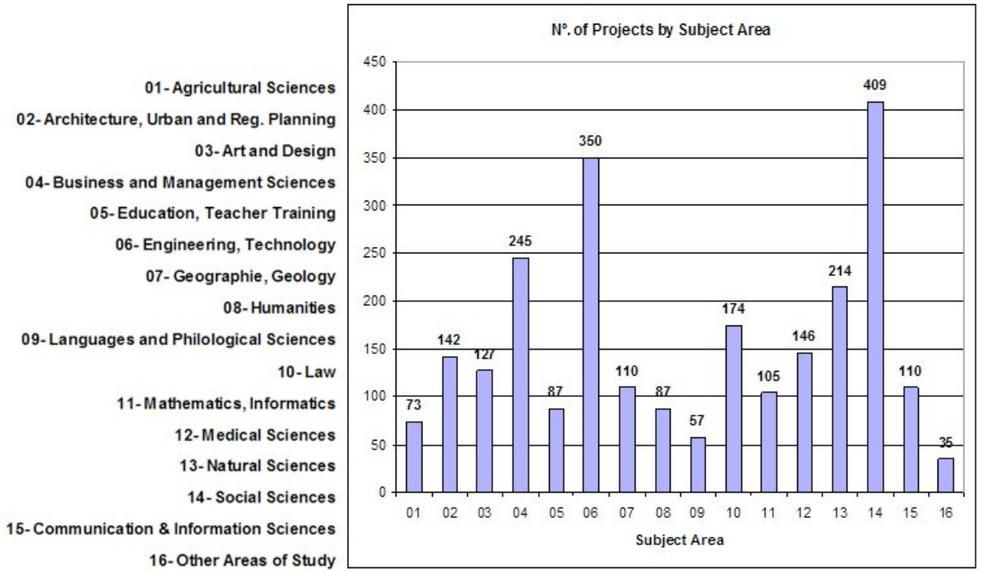


Latin America
(AR) Argentina; (BO) Bolivia; (BR) Brazil; (CL) Chile; (CO) Colombia; (CR) Costa Rica; (CU) Cuba; (EC) Ecuador; (GT) Guatemala; (HN) Honduras; (MX) Mexico; (NI) Nicaragua; (PA) Panama; (PE) Peru; (PY) Paraguay; (SV) El Salvador; (UY) Uruguay; (VE) Venezuela. ***Data: DEC 2008***

European Union
(AT) Austria; (BE) Belgium; (CZ) Czech Republic; (DE) Germany; (DK) Denmark; (ES) Spain; (FI) Finland; (FR) France; (HU) Hungary; (IE) Ireland; (IT) Italy; (LT) Lithuania; (NL) The Netherlands; (PL) Poland; (PT) Portugal; (SE) Sweden; (UK) United kingom. ***Data: DEC 2008***

As the AlBan Programme was based on individual rather than institutional initiatives the mobility flows were not restricted to predetermined areas of studies, thus representing real research and study interests of Latin American grantees in Europe.

Fig. 2 Distribution of scholarship holders by subject areas



The implementation of the AlBan Programme was a challenging logistical venture in terms of its geographical outreach (availability of scholarship for candidates from all higher education institutions from 18 LA countries); application and selection procedures (20.820 applications received and 14.532 evaluated), and supervision and monitoring of grant holders. Consequently, the co-ordination of the programme required strong and reliable partnership on both sides of the Atlantic to work together to reach out to universities and students, to provide them with necessary assistance, and to build confidence between home and host institutions. This important dissemination and information role was assumed among other institutions by Latin American university networks such as AUGM, ASCUN, FAUBAI and UDUAL. Their competent and committed staff members, extensive contacts throughout Latin America, and the credibility in LA region enabled efficient promotional campaigns, which was one of the building blocks of the success of the AlBan Programme.

Sustainability measures developed by SGroup

Following the AlBan Programme experience, the SGroup Network has become strongly committed to the objective of sustaining collaborative partnerships and capitalising on the accumulated expertise and extensive contacts in Latin America. The principle behind this approach was to consider EU-funding as seed money to build facilities, to capacitate human capital, and to establish relations for future collaboration. The University Networks have considerable flexibility to initiate tailor-made projects and activities for their members' benefit, which creates a favorable environment for experimentation and innovation. With this objective in mind, SGroup initiated collaboration agreements with AUGM, ASCUN, FAUBAI, and UDUAL, former focal points of the AlBan Programme in LA, which led to further joint participation in future Alfa or Erasmus Programmes.

Another example of the sustainability policy developed by the SGroup Network is mapping out and codifying areas of expertise of its individual members with the intention to share good practices with other members of the association. With regards to Latin American collaboration at present as many as 11 Erasmus Mundus Projects for Latin America have been co-ordinated by SGroup member universities e.g.:

- **University of Porto, Portugal** - EuroBrazilian Windows, EuroBrazilian Windows II, BABEL (Brazil, Ecuador, Paraguay, Uruguay, Peru), MUNDUS 17 (Brazil, Paraguay, Uruguay)
- **University of Valladolid, Spain** - VECCEU (Chile, Ecuador, Cuba, Venezuela), EXTERNAL COOPERATION WINDOW FOR CHILE, MUNDUS LINDO (Bolivia, Brazil, Chile, Cuba, Ecuador, Paraguay, Peru)
- **Polytechnic University of Valencia, Spain** - EuroTango and EuroTango 2 for Argentina
- **Sapienza University of Rome, Italy** - BE MUNDUS (Brazil)

Altogether 13 universities of SGroup Network have been actively participating in the mobility programmes with 9 Latin American countries. SGroup's role as associate partner in the above mentioned consortia is to guarantee visibility of projects within and outside Europe, to reach out to specific target groups with study offers, and to assist in developing sustainability plans.

Each of the co-ordinating institutions has developed good practices in the organisation and the implementation of academic mobility with Latin American universities regarding quality assurance mechanisms, recognition of studies, or cultural preparation of students, etc. This valuable expertise has been transferred to SGroup Network and it led to the establishment of the ***InterContinental Academic Exchange (ICon) Programme.***

ICon is a mobility scheme co-ordinated by the SGroup supported by the state-of-the-art software for managing academic mobility developed by the University of Porto which has integrated institutional practices of SGroup's members in the organisation of academic mobility with Latin America. Partner universities participating in the programme range from SGroup members on the European side, and LA partners from the former Erasmus Mundus consortia on the other.

ICon is not designed as a scholarship programme - candidates are expected to seek funding from national or international scholarship. However, it offers two-way mobility flows with a large degree of flexibility in terms of the choice of study offers (universities can submit study offers that they would like to internationalise), duration of studies (between 3-36 months), or the type of mobility (mobility flows are available for undergraduate and graduate students, doctoral candidates, postdocs and administrative staff).

The benefits from a mobility scheme organised by the SGroup Network are as follows:

- privileged access to a wide range of reliable and recognised institutions;
- structured information about diverse study offers available in Europe and LA;
- all types of academic mobility available;
- visibility and promotion of partner institutions in both regions;
- recognition of study and quality assurance mechanisms;
- possibility of networking for new funding programmes;
- facilitation of bilateral collaboration between individual universities as well as the associations of universities from both regions.

The sustainability measure for the Erasmus Mundus partnerships fostered by SGroup Network through the ICon Programme considers academic mobility an important vehicle of the internationalisation strategy of Science, Technology and Innovation (STI). Firstly, ICon encourages bottom-up initiatives with respect to the selection of research areas by doctoral candidates or postdocs, hence it holds a potential to develop around cross-disciplinary thematic priorities. Secondly, a structured collaboration between EU-LA can attract complementary scientific and innovative strengths in both regions, thus increasing the ability to tackle global challenges from different perspectives. Next, the reciprocity in the international collaboration between EU-LA ensures mutual access and mutual benefits from research and innovation infrastructure that universities participating in ICon make available to their partners. Last but not least, the ICon Programme responds to the needs of the new Horizon 2020, a new research funding programme of the European Commission that recommends a guiding principle to international collaboration based on horizontal or thematic rather than a geographical approach. As a result, the collaboration model within the ICon Programme developed with Latin America has been extended to the Eastern Partnership and China with the intention of diversifying technological and scientific expertise accumulated throughout the implantation of the Erasmus Mundus geographical lots.

The SGroup Network is also a partner in the Alfa PUENTES project, co-ordinated by the European University Association, which is another example of the consolidation approach of the expertise brought by 22 organisations of higher education - 8 from Europe such as EUA (co-ordinator), France (CPU), Germany (HRK), Spain (CRUE, OBREAL, SGROUP), Poland (CRASP) and Portugal (CRUP), and 14 from Latin America Colombia (ASCUN), Uruguay (AUGM), Mexico (UV, ANUIES), Guatemala (CSUCA), Argentina (CIN), Brazil (CRUB), Paraguay (UNA), Peru (ANR), Bolivia (CEUB), Chile (CRUCH), Panama (CRP), Costa Rica (CONARE) and Honduras (UNAH). Working with umbrella institutions for higher education institutions enables to tackle important questions of the internationalisation of education from diverse national and international perspectives, thus proving a leading role of university associations in shaping policy development in higher education.

Universities from around the world face new challenges such as the global competition, demand for new technologies and innovation, or attraction and retention of talents which require new strategic approaches not only from individual institutions, but also from regions.

Heads of State and government of the European Union countries and CELAC countries (Community of Latin American and Caribbean States) have recognised the global challenges as immediate priorities during the convention in Santiago de Chile from 26 to 27 January 2013 under the theme 'Alliance for Sustainable Development: Promoting Investments of Social and Environmental Quality'. The Summit Declaration highlighted the need to reinforce the Strategic Partnership between the two regions in research and higher education, which positions university network at the forefront of the dialogue between EU-CELAC countries to implement Action Plan approved for 2013-2015 with the following objectives:

- to attract talented and well trained individuals to ensure competitive research;

- to place a strong focus on the careers of young researchers (postdoc, doctoral candidates), and also Masters' students through joint degrees or collaborative delivery of programmes, joint labs, and partnerships with industry and other social actors; in particular, collaborative provision of doctoral degrees should be supported and promoted;

- to exploit good practices from existing EU programmes in higher education and research, for example cooperation and mobility grants through consortia comprised of universities from different countries of both regions which have been extremely successful and should be scaled up.

Advantages of sustainability plans developed in collaboration with university networks - conclusion

The European Commision-funded programmes such as the AlBan or Erasmus Mundus Programmes have paved the way to successful collaboration through facilitating personal relations, exchanging cultural experiences, and building facilities, or training human resources. However, regular dialogue and joint initiatives are indispensable to provide continuity to the collaboration after the EU funding expires. The collaboration of universities under umbrella organisations such as university networks can also be an alternative to limited funding opportunities.

In summary, an active role of university networks in building strategic sustainable relations produces economies of scale with considerable potential to:

- Create physical or virtual space for the transfer of knowledge and know-how;
- Build in-house expertise;
- Offer a structured approach towards academic collaboration;
- Codify good practices and ensure their multiplying effect;
- Facilitate access to collective and individual partners;
- Improve understanding of cultural differences.

Sustainable partnerships largely depend on expertise and understanding among partners, hence the relations among the partners should be built on trust, transparency, and commitment. Such sensitive yet strategic relations require time and also financial resources. This is where university networks come into play to stimulate the commitment of their members, to integrate resources, and to create favourable environment for further spin-off activities.

Author

Wioletta Wegorowska

Wioletta Wegorowska - since 2007 Executive Director of SGroup European Universities' Network in charge of the development of organisational policies, co-ordination of SGroup's activities and projects in the core areas of the collaboration such as the internationalisation strategy, academic collaboration, transfer of knowledge, and academic mobility. She is also responsible for building privileged partnerships with higher education institutions in regions of strategic importance to SGroup Network such as Latin America, Africa, USA, and China. She specialises in knowledge management in the public and corporate organisations with a special focus on the assessment and development of competences of academic staff.

Previously, she worked at the Adam Mickiewicz University of Poznań, Poland at the Centre for European Integration as project co-ordinator. She was a national co-ordinator of the CEI UniNet, a university network of the Central European Initiative. She has MA in English and Russian Studies.

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