RE-DEFINING VIRTUAL CAMPUSES: FROM A "FULLY-FLETCHED" VIRTUAL CAMPUS TO A BLENDED MODEL

Helena Bijnens, EuroPACE ivzw, Belgium, Johannes De Gruyter, AVNet – K.U.Leuven, Belgium, Ilse Op de Beeck, EuroPACE ivzw, Belgium, Paul Bacsich, Matic Media Ltd., UK, Sally Reynolds, ATiT, Belgium, Wim Van Petegem, AVNet – K.U.Leuven, Belgium

Introduction

The European Commission has set a goal that by 2012, 3 million students should participate in Erasmus. But what about the remaining 80% of students?

Virtual Campus schemes would offer educational opportunities that are no longer location dependent and allow for collaboration with foreign students and teachers (and thus promote intercultural understanding).

Apart from these cross-cultural and mobility aspects, a Virtual Campus has a huge potential to contribute to increased participation in lifelong learning: Students learn from their homes, after work in the time that is available for them. This in fact responds to the European Commission's "Detailed Work Programme on the follow-up of the objectives of Education and training systems in Europe". Key issues that are mentioned to reach the implementation of strategic objective "Facilitating the access of all to education and training systems" are: "Delivering education and training so that adults can effectively participate and combine their participation in learning with other responsibilities and activities" and also "Promoting flexible learning paths for all".

It is therefore of the utmost importance that decision makers are aware of the possibilities and pitfalls of Virtual Campuses.

Virtual Campus, Virtual Mobility

Benefits of Virtual Mobility and Virtual Campus initiatives are obvious:
- Access: Virtual Campus enables access to new, non-traditional, remote audiences
- Flexibility: learn and teach anytime and anywhere
- Skills: through using the technology students acquire new skills necessary for today's new work methods and business structures
- New partnerships: virtual collaboration of different institutions into the creation, delivery and support of courses; knowledge transfer; enlarged visibility of institution

Throughout the last decade, numerous initiatives have been set up to experiment with the establishment of Virtual Campuses and Virtual Mobility activities. Virtual Campuses have appeared in various forms and structures and also to varying degrees of success. But what is actually a Virtual Campus? And what do we mean by Virtual Mobility? Also a number of other phrases such as Virtual University, Open University, etc. are being used in this context.

The Virtual Campus concept is referred to by the BENVIC project as "a specific format of distance education and on-line learning in which students, teaching staff and even university administrative and technical staff mainly 'meet' or communicate through technical links."
BENVIC proposed following classification:
- *Virtual Classes*: teaching and learning in a virtual environment for campus based students or/and distance learners
- *Virtual Campus*: including virtual classes, but also research communication and collaboration as well as scientific services to the society at large - e.g. contract research and consultancy for companies and governmental bodies
- *Virtual University:* including student registration, student and staff administration, and eventually examination and creditation

Many other classifications exist, such as the one made by Sabine Seufert (2001):
- Alma Mater Virtualis
- Virtual Universities
- University Networks
- Corporate Universities
- Commercial Suppliers & Educational Providers
- International Education Consortia

Virtual Mobility on the other hand means, in the words of the glossary of the elearningeuropa.info portal: "The use of information and communication technologies (ICT) to obtain the same benefits as one would have with physical mobility but without the need to travel". The Being Mobile project opted for a more elaborate definition: "Virtual Mobility is a form of learning which consists of virtual components through a fully ICT supported learning environment that includes cross-border collaboration with people from different backgrounds and cultures working and studying together, having, as its main purpose, the enhancement of intercultural understanding and the exchange of knowledge".

The same project provides four main types of virtual mobility activities:
- A virtual course (as part of a programme) or seminar (series) at a Higher Education Institution
- A whole programme at a Higher Education Institution
- Virtual student placements
- Virtual support activities to physical exchange

All in all, there seems to be a common feeling a redefinition of the "Virtual Campus" concept is necessary. This will be done in the Re.ViCa project (see below) but without losing sight of the justification in terms of Erasmus aims.

Redefining The Virtual Campus Concept

Examples of Virtual Campus initiatives in the past are manifold. To name a few: Finnish Virtual University, Swiss Virtual Campus, FernUniversität in Hagen, African Virtual University, etc. Furthermore, several eLearning, Minerva and other projects supported by the European Commission have dealt with integrating virtual components into traditional universities. Results have been published in for example:
- Peer-Review Handbook (MASSIVE project)
- Manual for a Collaborative European Virtual University (cEVU project)
- Virtual Mobility Manual. How to teach internationally from your own desk (REVE project)
- Creating New Opportunities for Learning – How to organise international virtual seminars (VENUS project)

Through these previous experiences, we notice a shift of concepts: from the "well-defined" clear, 100% online Virtual Campus to Virtual Mobility, whereby the more traditional universities open their borders, collaborate supra/intra institutionally and often (inter)nationally, and/or involve non-traditional students through e-learning. There is no strict definition of Virtual Campus anymore. Every campus becomes a Virtual Campus and "blended models" gain more interest and attention.

Nowadays most people mean by the phrase virtual university a university which carries out much of its teaching, perhaps all of it, at a distance from the learner. The phrase virtual campus is often applied to a single university which has a virtual university "fringe" round a physical campus, but there are some totally virtual campuses, such as the Open University of Catalonia.

Another possible starting point is to define a Virtual Campus as: "a large-scale change initiative at a university or consortium of universities delivering a substantially increased amount of technology-enhanced learning with as part of its aim the delivery of courses to groups of learners spending all or a substantial part of their time off the campus."

In this context, several kind of models or scenario's could thus be thought of, differing from each other by the level of collaboration between institutions and to what extent virtual components are added:
- Traditional universities open their offer through e-learning for the "distant", "off-campus" student; the lifelong learner whereby every student becomes a student of a virtual campus on his/her own
- Virtual Communities of Practice and Virtual Learning communities are integrated into traditional universities

- Virtual classes and seminars for traditional students are organised
- Virtual collaboration between universities is stimulated for example through joint course development and joint masters degrees
- The "extended university" reaches citizens through e-learning using mostly non-formal online evening seminars
- Multiple campuses of one university collaborate in course provision by technology: the teacher teaches in one campus for local and distant student group (through for example videoconferencing).

K.U.Leuven: From A Traditional To A Multicampus University.

An example of a redefinition of virtual campus can be found at the Katholieke Universiteit Leuven (K.U.Leuven) in Belgium. This traditional university progressively organizes its educational support from a *multicampus* perspective.

In recent decades, the 'Katholieke Universiteit Leuven' (K.U.Leuven) in Belgium has become a multicampus university. As a result of the historic expansion of the university its three groups of faculties have become separate entities, geographically spread over Leuven: Human Sciences are housed in the centre of the city, Exact Sciences in the east and Medical Sciences in the north. Since 1965, the university also has an additional campus in Kortrijk, in the west of Belgium. And in 2002, thirteen institutions of higher education in Flanders have joined forces with the K.U.Leuven in the Association K.U.Leuven in order to occupy a position of strength within the new European educational landscape and to work together towards quality improvements in education. This Association has 23 different campuses. In addition the K.U.Leuven profiles itself as an international university. The institution has agreements with various universities worldwide to enable and support a growing number student and staff exchanges between campuses. Lastly, with the introduction of ICT the university is also facing an extended form of multicampus education. Online networks of student groups and/or teaching staff – sometimes linked to but often independent from the institution – are emerging, in learning communities or communities of practice. Each participant in these networks can be considered a small virtual 'campus', learning from home, work or through a mobile device.

The current structure of the university thus challenges the K.U.Leuven to organize and support its education with attention for communication and collaboration between the various campuses. Today this is most often realized through physical mobility: staff and/or student move between different locations. This is the case for interdisciplinary courses between Leuven's three groups of faculties and for staff mobility between Kortrijk and Leuven. It is also the most common form for international exchanges. Yet the university is progressively supporting initiatives that replace or enhance physical with virtual mobility, seeking to integrate aspects of 'virtual campuses' into traditional education to stimulate collaboration between the sites of the Association, to support student and/or staff exchanges in Europe or in the world, to enhance communication with developing countries or to sustain virtual learning communities.

At a basic level (virtual/blended) multicampus education in Leuven is revealed in initiatives that create, offer and localize joint course materials. While teaching staff and students remain at their own campus for the entire course, specific course modules learning materials are used that have been developed, at a distance, by an inter-institutional (multicampus) teaching team. These course materials are often offered on a common website, a databank or a virtual learning environment. Recently there are also teachers who (co-)develop or use 'Open Educational Resources'.

Not only course materials are collaboratively created or shared. Also (laboratory)-infrastructure is shared between locations to avoid a double set up of equipment. In some cases this pooled infrastructure is also virtual. Some (dangerous) laboratory experiments or experiments that require students and staff to be at different locations (students watch a complex surgical operation) can now happen thanks to virtual support to bridge the distance between the actual experiment and the audience. The infrastructure of the experiment itself is in a limited number of cases entirely digital by means of a simulation on a common virtual platform.

Furthermore, multicampus education can be about joint learning activities. For the 'Student Business Game' for instance, students from different institutions f the Association K.U.Leuven play a business game on their own campus after which the winning teams compete with each other via videoconferencing before a jury of teaching and company staff. Joint learning activities can also be about e-coaching, about writing an academic paper at a distance or student placements. All activities invite multiple sites to collaborate in the creation, delivery or support

of the activity, with the help of technology. At K.U.Leuven joint learning activities are particularly interesting for interdisciplinary modules, courses or programs, such as activities involving both learners studying medicine or nursing, industrial or civil engineering, etc.

Building on joint learning activities, another type of multicampus are joint courses. A joint course can be (a) a course developed by one campus (institution) and offered to students at another campus (institution), (b) a course developed by one institution and *used but adapted* by another institution or (c) a jointly developed course offered to students of all involved institutions (Haake et al., 2006). One variation of this type are virtual seminars: co-created or co-delivered seminars set up as a single course, or in a series of courses - broadcasted over multiple sites using ICT (videoconferencing, web conferencing, streaming, etc)[1]. The KULeuven has a strong expertise and long tradition in organizing virtual seminars. The 'Pentalfa' project for instance is a multidisciplinary, post-graduate distance learning initiative of the Faculty of Medicine, aimed to offer (extra) training broadcasted to various hospitals of the Flemish Hospital Network K.U.Leuven. It is currently in its 8th year and there are plans to enhance the initiative with an international component. The university is also looking into the use of virtual seminars for knowledge exchange and networking between the institutions of the Association and beyond (society in general, companies, alumni, etc.).

Next, multicampus education is also revealed in the offer of a complete, 'multicampus' programme, which many institutions can be contributing in. A number of Bachelors and Masters are already set up within the Association K.U.Leuven, involving multiple teaching teams from different institutions. The challenge is to streamline these programs around a common denominator, yet with respect to any local specificities of each campus involved. Virtual initiatives – joint learning materials, joint learning activities, joint courses – all play a vital part in this. Eventually a completely virtual multicampus programme comes close to the traditional form of distance education, as offered by the Open University for instance. From the perspective of more and better flexibility in education, it could be interesting to bring distance and regular education together. Regular programs could put forward a number of distance learning courses (and vice versa), in replacement of or as an enhancement to their offer: they could support or realize the transition between certain bachelors and masters in a flexible way, (work) students could enhance their own study package with a number of distance education courses. In Flanders, the current offers of both the regular universities and the Open University are still entirely separate from each other[2]. Yet under certain conditions the Open University does already allow its students to take courses from other universities in addition to the curriculum of the own education. K.U.Leuven is currently studying the opportunity to present this interpretation of multicampus to its students.

Ultimately, multicampus education is also about a range of virtual support activities with regard to real, physical mobility. A large range of actions can be mentioned here. At the early, preparatory phase of a physical student (or staff) exchange, multicampus support can be given through the set up of community websites for future exchange students where they can meet current students who help them find housing, give them information etc. Within the Association K.U.Leuven such a platform is being created and tested for new foreign students to find a '(virtual) buddy'[3]. There is also the opportunity for teaching staff to meet the interested new students online, for a language 'pre-selection' or just a first get-together. This has been tested as a pilot in the REVE project for the Erasmus Mundus Master in Adapted Physical Activity (Rajagopal et. al., 2006; Bijnens H. et. al., 2006). After the exchange, the aforementioned communities can continue to live on as a virtual alumni platform; or students could be examined at a distance through virtual mobility (video communication).

Reviewing Virtual Campuses To Enhance Their Future: The Re.Vica Project

While numerous Virtual Campus initiatives in the past decade have gained experience and know-how, there is a striking lack of validation and dissemination of this knowledge. Detailed information on Virtual Campuses is hard to come by. To raise awareness and redefine the concept of Virtual Campus in order for it to be applicable to the educational needs of today, the Re.ViCa project has been set-up. Re.ViCa stands for "Reviewing (traces of) European Virtual Campuses". The project runs from October 2007 to September 2009. It brings together nine partners in the field that will use their privileged strategic positions to collect vital information and open it up for the wider community of the European Higher Education Area. The project can amongst others build upon the

---

[1] Research into the efficient and effective setup of (international) virtual seminars is the subject of the VENUS project, supported by the European Commission and coordinated by EuroPACE with participation of K.U.Leuven.

[2] In the absence of a Flemish institution offering exclusive distance education, a close cooperation with the Open University of the Netherlands has been set up.

[3] Cf. the KHLeuven Buddy System – a pilot in the VM-BASE project, supported by the European Commission and coordinated by EuroPACE with participation of K.U.Leuven. http://www.khleuven.be/index.php?page=289 and http://vm-base.europace.org

partners' experience with and involvement in Virtual Mobility/Virtual Campus projects (e.g. cEVU, e-LERU, VENUS, Victorious…) and initiatives (e.g. Finnish Virtual University, UNINETTUNO, UkeUniversity,…). In this respect, we can also refer to the recently published book "European Networking and Learning for the Future. The EuroPACE Approach" which gives an overview of the changes that took place in the field of technology enhanced learning and of how the EuroPACE network, coordinator of Re.ViCa, has been evolving from an interactive model where universities and their partners progressed together "Towards a Virtual University for Europe" to an organisation with main focus on innovation and collaboration in learning.

The Re.ViCa project is making an inventory and systematic review of cross-institutional Virtual Campus initiatives of the past decade within higher education at European, national and regional levels. It will not only look at currently operational Virtual Campuses, but also at the legacy and impact of those Virtual Campus initiatives that have closed down or become dormant. Relevant parameters and success factors for evaluating and comparing Virtual Campuses will be identified.
In a second stage of the project in-depth discussions are organised to incorporate the input of different interest groups: including Virtual Campus management bodies, relevant networks, students, policy makers and a range of experts at a global as well as European level. This will also allow comparing European cases to selected non-European initiatives.
Finally, a set of action points and guidelines for decision-makers are to be formulated that can be applied to ensure the realisation of successful European Virtual Campus initiatives.

Main results of Re.ViCa will be:
- A global benchmark overview
- Knowledge sharing through the organisation of discussion sessions at carefully chosen events and meetings with experts and policy makers
- A manual with guidelines, best practices, recommendations

All results and information gathered during the project (manual, desktop research results, outcomes of the workshops, etc.) will be collected on the project wiki http://revica.europace.org. It will be a platform where both experts, policy makers, providers, sponsors and key actors can meet and stimulate dialogue.

As such, Re.ViCa's added value lies not in the creation of a new Virtual Campus but in the foundations it will lay for all future or current initiatives which can learn from past and current initiatives. It will provide trustworthy research results, in which feedback from all stakeholder groups has been incorporated and which can be used as standard literature for all ongoing and future initiatives. It will help to make the most out of the knowledge gained by each initiative, to foresee hidden traps and to find ways of incorporating successful features of the initiative in the university structure itself, should the Virtual Campus in its original form have to be discontinued. Its aim is to avoid a situation whereby every new Virtual Campus proponent has to start from the beginning, and will provide them instead with a validated and comprehensive view of the Virtual Campus landscape in Europe as evidenced in the last decade.

Exchange of information, expert validation and sharing of good-practice beyond the partnership about Virtual Campus is the key objective of this project. Re.ViCa aims to look at the past of Virtual Campus initiatives to enhance their future.

Conclusion

In this paper we have first described the concepts of Virtual Campus and Virtual Mobility and referred to several past and present projects and initiatives in the field. Through these previous experiences, we have noticed a shift of concepts: from the "well-defined" clear, 100% online Virtual Campus to Virtual Mobility, whereby the more traditional universities open their borders and "blended models" gain more and more interest. The K.U.Leuven case clearly demonstrates this evolution.
To raise awareness and redefine the concept of Virtual Campus in order for it to be applicable to the educational needs of today, the Re.ViCa project has been set-up. The purpose of this project is to make an inventory and systematic review of cross-institutional Virtual Campus initiatives of the past decade within higher education at European, national and regional levels. Outputs will include a set of action points that can be applied to ensure the realisation of successful European Virtual Campus initiatives.

Acknowledgement

References

1. BENVIC Benchmarking of Virtual Campuses: http://www.benvic.odl.org

2. BIJNENS, H., BOUSSEMAERE, M., RAJAGOPAL, K., OP DE BEECK, I., VAN PETEGEM, W. (EDS.) (2006) *European Cooperation in Education through Virtual Mobility. A Best-Practice Manual.* Leuven, November 2006. http://www.being-mobile.net/pdf/BM_handbook_final.pdf

3. BIJNENS, K., MICHIELSENS, C., RAJAGOPAL, K. (EDS.) *Virtual Mobility Manual. How to teach internationally from your own desk. Leuven, December 2006.* http://reve.europace.org/drupal

4. BOONEN, A., VAN PETEGEM, W. (EDS.) (2007) *European Networking and Learning for the Future. The EuroPACE Approach.* 2007, Garant, Antwerp-Apeldoorn.

5. Elearningeuropa.info glossary http://www.elearningeuropa.info/main/index.php?page=glossary

6. e-LERU http://www.e-leru.leru.org/

7. EUROPEAN COMMISSION (2001) *Detailed work programme on the follow-up of the objectives of education and training systems in Europe.* http://www.aic.lv/bolona/Bologna/contrib/EU/workprog.pdf

8. HAAKE, J.M., LUKOSCH, S., RAJAGOPAL, K., VAN PETEGEM, W. (2006) *Models for Implementing Virtual Studies Abroad.* Proceedings of the EDEN 2006 Annual Conference. Vienna, June 14-17, 2006, p. 273-278.

9. MASSIVE Modelling Advice and Support Services to Integrate the Virtual Component in Higher Education: http://cevug.ugr.es/massive

10. RAJAGOPAL, K., VAN PETEGEM, W., VERJANS, S. (2006) *A Need for Virtual Mobility in Mainstream Education; Case Study of the Erasmus Mundus Programmes at the Catholic University of Leuven, Belgium.* Proceedings of the EDEN 2006 Annual Conference. Vienna, June 14-17, 2006, p. 284-289.

11. Re.ViCa Reviewing (traces of) Virtual Campuses http://www.europace.org/rdrevica.php

12. SEUFERT, S. (2001) *E-learning Business Models, Strategies, Success Factors and Best Practice Examples* In FILLIPPI, R., WANKEL,R. (EDS.) Rethinking Management Education for the 21st century. Greenwich: Info Age Press.

13. VAN DEN BRANDEN, J., OPSOMER A. (2004) *Manual for a Collaborative European Virtual University.* Report cEVU project. Leuven, January 2004. http://www.europace.org/articles%20and%20reports/cEVU_manual.pdf

14. VENUS Virtual and eMobility for Networking Universities in Society: http://www.venus-project.net