



Reviewing (traces of) European Virtual Campuses

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Report on History of Virtual Campuses

We drew up a historical overview of the evolution of the concept of the Virtual Campus and the societal context with which it is so closely linked.

The text is based on the other work carried out by our research team, and relies on interviews we did with 16 international experts, the Re.ViCa inventory of virtual campuses, in-depth country reports and a literature review.

History of Virtual Campuses

The concept of the virtual campus is in fact only around 15 years old, dating from roughly 1995. But the idea of virtual teaching had already emerged by the early 1700s. In the past, virtual teaching was carried out by posting text-books to a student, who read them and sent back assignments to be marked. Communication between the student and the academic was via correspondence – hence the phrases *correspondence teaching* and *correspondence university*. This approach in fact still happens in many institutions today, especially in less developed parts of the world. The concept of virtual teaching was first documented in 1728, when an advertisement appeared in the *Boston Gazette* from Caleb Phillipps advertising that any “Persons in the Country desirous to Learn this Art, may by having the several Lessons sent weekly to them, be as perfectly instructed as those that live in Boston”.¹ Correspondence teaching evolved into the term *distance education*, first used in a [University of Wisconsin-Madison](#) catalogue for the 1892 school year. In 1905 the first true distance learning institution, the [University of Wisconsin-Extension](#), was founded. Distance education is often seen as the precursor to online learning or technology-enhanced learning. In the Re.ViCa project we use the term *virtual* to mean enhanced by means of technology.²

In Europe, the [Open University of the UK](#) is often seen as the first successful distance teaching university, using communication technology to achieve “education for all”. In the early 1970s, the use of television broadcasting for teaching in universities became popular, most notably in the UK Open University – originally called the “University of the Air”. Some TV-based universities still exist, like [NETTUNO](#) or the [Shanghai Television University](#), but the story in recent years of broadcast TV use in universities (including open universities) has been one of a long, broad retreat masked by a number of temporary local advances.

Although television can serve as a democratic learning tool, it misses the characteristic of being interactive. For learning and teaching, two-way communication is very important. Hence other technologies were introduced to accommodate these needs, e.g., videoconferencing (VC). The first VC systems started to appear on the market operating over ISDN (digital telephony) networks, and expanded throughout the world in the 1980s.³ At the end of that decade, the use of email and bulletin boards became common to foster communication between distance learners and the staff teaching their courses.

In the early 1990s, the major breakthrough was the emergence of the internet and especially the World Wide Web (WWW). Teachers – or at least the early adopters among them – were soon experimenting with their own web sites to support their courses. These early adopters started to offer extra learning materials online. In some cases, these web sites evolved into real management systems, called course management systems (CMS), dealing with all organisational aspects of study, from student registration through automatic evaluation. Later more generic and commercial systems appeared, such as TopClass, WebCT, Blackboard, Docent, etc., which could serve first individual courses, and later on a broad spectrum of teaching and learning needs in educational settings.⁴

Increasingly, people started to use the term *virtual campus* for this “place” where students and teachers shared information and communicated with each other (mainly through email and online materials). In the past, many other terms were prevalent, each with its own nuancing – e.g., *online university*, *net university*, etc.

The actual term *virtual campus* made its first appearance in Europe around the mid-1990s. Experts first heard it used in national programmes and strategic documents from the European Commission. More than 10 years ago, European policymakers started to stimulate the analysis of the potential of ICT to enhance learning in higher education. The strategic reports of the European Commission state that “new technologies” are of strategic value to build a “university of the future”. A direct result of these reports was a small number of projects focused on research into the possibility of setting up virtual European universities. One prominent example was the [VirtUE](#) (Virtual University for Europe) project; this ran from 1996 until 1998 under the TEN-ISDN Programme from the European Commission. The VirtUE project was proposed as a feasibility study for the

development and implementation of a networked (or distributed, Euro-ISDN-based) virtual university for Europe in cooperation among classical universities, open universities, technology providers and telecom partners. Within this Virtual University, the VirTUE partnership identified three conceptual models of network-based educational services: Virtual Class and Virtual Campus; Network for Flexible Open and Distance Learning;⁵ and Network for On-demand Learning. In our search for definitions and background information we also found [BENVIC](#) (Benchmarking of Virtual Campuses), one of the earliest projects funded by the European Commission addressing the issue of benchmarking virtual campuses. In the BENVIC project, the virtual campus concept is referred to 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”.⁶

Next to BENVIC, through numerous other e-learning and [Minerva](#) programmes supported by the European Commission in the last decade, many institutions and organisations have been working on exploring and refining the concept of the virtual campus. Noteworthy results have been published, e.g., in the *Manual for a Collaborative European Virtual University*, the main outcome of the 2001–2003 [cEVU](#) (Collaborative European Virtual University) project. cEVU examined why a collaborative European virtual education offering would be beneficial to universities; how it should be structured and operate; and what should be put in place to create it. The report focuses on collaborative European virtual universities as one format of transnational virtual higher education.⁷ The Peer Review Handbook outcome of the 2005–2007 [MASSIVE](#) (Modelling Advice and Support Services to Integrate the Virtual Component in Higher Education) project – which designed a model of necessary support services for European traditional universities to successfully implement the virtual component of teaching – has also had an influence on our understanding of the virtual concept.⁸

In June 1996, the term *virtual campus* emerged at an early workshop on this topic, at the EdMedia/EdTelecom conference in Boston, Massachusetts, organised at short notice by Robin Mason and Paul Bacsich (both then at the UK Open University). There was a workshop on virtual universities at Online Educa at Berlin in November 1996, and the topic featured largely in the Sheffield conference [FLISH97](#) (Flexible Learning on the Information SuperHighway) in May 1997. Subsequently the topic exploded, and in the early 2000s conferences around the world featured the concept, sometimes to the exclusion of anything else. National governments followed this trend: for example, a task force of the Finnish government used the term *virtual university* in a draft strategy for Finnish education and research toward the information society. In the UK the phrase *virtual campus* became prominent around 1997, when various UK universities launched their own versions of a virtual campus.⁹

The first experiments with the actual set-up of virtual campuses were initiated around the same time. In 1995 The [Open University of Catalonia](#) became the first virtual university in Europe, totally dependent on telecommunications and computers. The [University of Oulu](#) in Finland experimented with the set-up of a virtual campus. At the 1998 term-opening ceremony of [Helsinki University of Technology](#) (TKK), rector Paavo Uronen brought up the idea of “Finland’s Online University”. At the same time, the Minister of Education, Olli-Pekka Heinonen, suggested that the committee preparing the Information Strategy for Education and Research should include a proposal for a virtual university. The Portuguese government also launched a Virtual Campus project to promote the use of ICT in the classroom. The [Swiss Virtual Campus](#) programme was launched in 1999 by a joint proposal of the Swiss University Conference (SUC) and its planning commission to promote the use of new information and communication technologies in Swiss universities. Also in Europe, the [Bavarian Virtual University](#) was founded in 1999, and launched its first programme in May 2000. Hibernia College was set up in 2000 as Ireland’s first private online college; it began accepting in students in 2002, and has continued to grow ever since.

In Canada they started to experiment with remote “tele-education” even earlier. In 1993, [Prof. Rory McGreal](#) reports that they were setting up about 30 community learning sites and linking them to community colleges. Later on, as educators discovered the World Wide Web, they started to experiment with a computer-based audio graphic system where people would write on tablets and travel virtually to these community centres where students would study. These linked sites evolved

into the tele-campus. Unfortunately when a new government took control, the funding ran out and the tele-campus basically faded out. In the meantime, [Athabasca University](#) created the [Canadian Virtual University](#), a consortium of 11 universities across Canada.

[Colorado University Online](#) was one of the first fully accredited online education programmes in the [USA](#), created in 1996 by the [University of Colorado Denver](#) (UC-Denver). CU Online allows students to pursue the same University of Colorado Denver courses and degrees as those attended by students on campus, taught by the same faculty members. Another early bird was The [California Virtual University](#) (CVU), launched in autumn 1997 with 700 courses, using funding from the Alfred P. Sloan Foundation. CVU was essentially a portal to the online courses offered by institutions from all segments of higher education across the state of California (i.e., the University of California, the California State University, the California Community Colleges, and the independent colleges and universities of California). In 1999 – with 112 accredited public and private institutions offering more than 2,000 online courses through CVU – CVU was unable to secure the necessary funding to continue as an independent project. The [California Virtual Campus](#) (CVC) catalogue of distance education programmes and courses continues the work of CVU.

Even in less developed countries like Kenya, policymakers started to experiment with the set-up of virtual campuses and universities. One prominent example is the [African Virtual University](#) (AVU), initially launched in Washington in 1997 as a World Bank project. It was later transferred to Nairobi, Kenya in 2002.

The virtual campus concept has changed since it first came into use, because now more and more universities see the possibilities inherent in offering courses off campus. We see an increasing number of universities offering courses themselves on a virtual campus basis. Additionally, the term *virtual campus* is often used to describe international cooperation among universities from several countries. The advent of social software has enabled further opportunities for cooperation. While there are some institutions adopting fully online courses, it is now most common for courses to be *blended*.

In the last few years there has been an apparent decline in usage of the term *virtual campus*, but a continuing growth in the phenomenon. A number of other phrases have crept in over the years. A *distance teaching university* is essentially a correspondence university. An *open university* is in strict terms a university which has an open admissions policy (i.e., anyone can become a student, although not anyone can graduate – students still have to pass their courses), but increasingly this term is used to describe distance teaching universities in general, and even those which are not open in the open admissions sense. It is for reasons of this sort that the European Commission theorists coined the phrase *open and distance learning* (ODL), basically to avoid making difficult distinctions.

And in the early 2000s, the phrase *borderless education* (sometimes even *borderless university*) came into vogue, under the influence of Australian work, but the phrase has not been used in recent years.

Conclusion

This short introductory text about the history of virtual campuses is of course only a snapshot – it is not our intention to give a comprehensive overview of their history. The text is based on the other work carried out by our research team, and relies on interviews we did with 16 international experts, the Re.ViCa inventory of virtual campuses, in-depth country reports and a literature review.

Although the term *virtual campus* is 15 or so years old, it is still in its infancy and changing very quickly. Over the years, observers 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, collaborate supra-/intra-institutionally and often (inter)nationally, and/or involve non-traditional students through e-learning. Actually, there is no strict definition of *virtual campus* anymore. Every campus becomes a virtual campus. “Blended models” gain more and more interest and attention. All in all, there seems to be a common feeling that a redefinition of the virtual campus concept is necessary, in order for it to be applicable to the educational needs of today.

In the next chapter we describe how we would define the term *virtual campus* and how it is used in different European countries today.

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