

“Better Than Being There”:

Where Online Learning Makes the Most Sense

Vlad Wielbut

Online Learning Is Dead, Long Live Online Learning!

The late 1990s and the first couple of years of the 21st century in the United States enclose the rapid rise and the even more rapid fall of the “online learning fever”. It was, of course, a part of the much broader “Internet fever”, which spurred a number of interesting phenomena, including the “New Economy” and the notorious “Internet bubble”. At the height of this fever there were frequent, bold pronouncements that the Internet-based learning was the future of education, accompanied by stern warnings that any institution, especially of higher learning, that did not take this seriously and prepare itself for this future, would end up missing the boat and, perhaps, facing extinction.

Not surprisingly, quite a few American colleges and universities took this *very* seriously, initiating a number of online learning programs in order to at least keep up with, if not outdistance, the competition. Nobody likes being a dinosaur. This was especially true of the smaller colleges, who saw this as an opportunity to move ahead in this competitive game, and whose size allowed them to be more nimble and respond to change faster than some of the behemoths, especially the big, public universities. However, even the large, prestigious institutions found themselves lured into pouring significant amounts of money into e-learning and distance education ventures. Just a handful of examples, among many:

- Cornell University invested \$12 million in eCornell
- New York University Online and the producer of e-learning software, Click2Learn, formed a partnership
- Temple University opened Virtual Temple

- The publishing house Harcourt Higher Education became a virtual college in 2000, predicting 50,000 to 100,000 student enrollment within 5 years
- British Open University opened a US branch

A few years later, most of these projects were either killed or significantly scaled back: Virtual Temple closed down; Harcourt threw in the towel after admitting... 32 students in 2001; having lost \$20 million, Open University left the US; New York University swallowed NYU Online; eCornell continues to operate but on a smaller scale.

Does this mean that the phenomenon known as Distance Education, e-Learning, Online Learning, Distance-Independent Learning, etc¹ is dead and can be dismissed as yet another short-lived fad borne out of the “Internet craze”? The answer is, no. The famous futurist Alvin Toffler said this about dismissing the impact of the Internet on the economy: “To think that the new economy is over is like somebody in London in 1830 saying the entire industrial revolution is over because some textile manufacturers in Manchester went broke.” Similar admonition could be addressed to people, who believe that education can simply return to the way it was done prior to 1990s.

The fact is, education continues to undergo changes, albeit with less fanfare than a few years ago, and experiencing them more as an evolutionary process rather than a radical and sudden revolution, but the changes are real and, to a large degree, effected by the quiet but steady absorption of Internet-based tools. It is, of course, trivial, to point out the fact that American students in almost all grades now rely on the World Wide Web as a resource no less (perhaps more) important than their textbooks. It is somewhat less trivial to mention, that the majority of university-level courses now use some kind of Course Management System (CMS)² to augment their classroom instructions and interactions. A lot of schools see online learning as a way of reaching to and attracting non-traditional, but often very profitable student populations, such as working professionals.

¹ Sometimes these terms are used in naming different things, but sometimes they are used interchangeably, adding to confusion. For the sake of consistency, we will stick to the term “Online Learning” throughout this article.

² A CMS usually consists of a course syllabus, discussion board, gradebook, chat room, mechanism for submitting assignments, etc. Examples include: Blackboard, WebCT, ANGEL. The University of Michigan uses CTools, an open-source system being developed in collaboration with several other universities.

However, in this article I would like to set aside these kinds of implementations of online learning, important though they are, and focus instead on a kind of online learning that goes beyond being a mere add-on to “traditional” classroom education, offering a unique value that would be difficult, if not impossible, to obtain in a non-online setting. This value is often called “better than being there”, a term that implies, somewhat counterintuitively, an advantage of virtual over physical presence. What could possibly be better than having students gather in one physical location in order to learn, interact, and socialize? The following two examples from the University of Michigan will try to answer that question.

Exhibit 1: Globalization and the Information Society

The University of Michigan did not jump onto the online learning bandwagon, certainly not in a way that would generate headlines. One feels tempted to attribute this to an incredible foresight, but, in fact, it had much more to do with the considerable size and decentralization of this university, not to mention a measure of Midwestern conservatism, than with the early realization that the emperor had no clothes. This isn't to say that the University simply stayed on the sidelines while others tried to adapt to and shape the emerging trends. On the institutional scale, the U of M was one of the first to develop and use its own CMS, and now, eight years later, is one of the founding members of the Sakai Project (<http://sakaiproject.org/>), a community source software development effort to design, build and deploy a new Collaboration and Learning Environment (CLE) for higher education. Individual schools and departments are able to pursue their own e-learning strategies, and many have, particularly in the areas of continuing and executive education. Finally, faculty members themselves have, in some cases, been at the forefront of change, experimenting with new approaches to teaching.

In January 1999 the University of Michigan School of Information launched a unique course entitled “Globalization and the Information Society”. Taught by Prof Derrick Cogburn, the course enrolled students from three universities: University of the Witwatersrand in Johannesburg, South Africa; American University in Washington, DC; University of Michigan in Ann Arbor, MI. The students attended the course from their respective alma maters, thanks to the then groundbreaking technology of web

conferencing. Using a software tool called Placeware (version 1.0), provided to them for free by the Alliance for Community Technology, students gathered once a week in a “virtual auditorium” to listen to the live lecture, interact with the professor and the other students (via voice, textual chat, and a number of built-in tools, such as polls and feedback), work in groups, and present their projects to the class.

By the request of the professor at the beginning of the semester students formed “global syndicates”, small groups of up to 6 members, making sure that each such group included at least one student from each participating university. The syndicates then assumed certain roles, chosen by the students, of major players in the globalizing world, e.g. international organizations, multinational corporations, national governments, large nongovernmental organizations. Aided by the weekly lectures, assigned readings, class discussions, and their own research, students would work on achieving the best possible understanding of the choices, limitations, pressures, needs, and goals of the entity they chose to represent in regard to telecommunication and the free flow of information, and submit their findings in the form of a report and a final presentation to the class.

The real-time interactions through the use of Placeware in this course were complemented by the use of asynchronous tools, such as e-mail, an online discussion board, a website, and later CTools, the next-generation CMS developed by the University of Michigan as part of the Sakai effort. Later iterations of this course included a larger number of participating universities³ and Placeware was eventually replaced by a somewhat more powerful tool – Centra Symposium - but the structure and logistics of the course remained the same. The students never met their counterparts from the other universities. Instead, the professor traveled to the various locations throughout the semester, so that no group of students would feel like “second class” and would get a chance to interact with the professor directly.

The use of synchronous web conferencing tools in this course was, of course, an important factor that contributed to its success by emulating – to an extent not possible with asynchronous tools – the rich interactions that happen in a physical classroom: raising one’s hand, applauding, laughing, voting, showing slides, stepping out of the

³ The University of Fort Hare and the University of Pretoria (both in South Africa) were represented in at least one of the courses.

room, changing a seat to “sit” close to the members of one’s group, taking center stage, etc. However, the truly profound innovation of this course was that it gave students, through an intelligent use of novel technology, the opportunity to experience working in the environment they were learning about: globalized, almost borderless telecommunication introducing entirely new ways of doing things.

Exhibit 2: Global Product Realization

One particularly forward-thinking member of the faculty of the UM College of Engineering came upon the idea of a course, in which students from across the globe would learn – by doing – the ins and outs of creating a new kind of product: a “global” product that could be manufactured and marketed, with slightest possible modifications, in various parts of the globe. In late 1999 he and two other professors interested in participating in this experiment solicited the technological guidance of the Alliance for Community Technology, and less than a year later, the graduate-level course “Global Product Realization” was offered for the first time, concurrently at three partnering universities: the Technical University of Delft in The Netherlands, the Seoul National University in South Korea, and, naturally, the University of Michigan.

Like the course described in the preceding section, this one also relied heavily on highly interactive, rich-media communication in real time, but instead of the low-cost web-conferencing option, the decision was made to use high-bandwidth videoconferencing⁴. All three institutions agreed to obtain compatible, state-of-the-art equipment that would allow 3-way conferencing without the need for prohibitively expensive, third-party bridging services. Having determined that the public Internet of that time, with its high latency, bandwidth fluctuations, and packet loss, would not meet the requirements of 15 fps, full-screen video, the units connected via ISDN lines at 384 kbps⁵. (In recent iterations of this course, with the participating institutions connected to the much faster and less congested Internet2, IP-based videoconferencing became a viable, low-cost option.)

⁴ Web-conferencing *was* used, but merely as the means of sharing visual content (e.g. PowerPoint slides) during lectures, without having to use the live video for that purpose.

⁵ Resulting in the staggering bill for \$15,000 for phone charges alone at the end of the semester.

With the live video projected on large screens in each of the 3 locations, students and professors had a sense of having their classrooms extended, as if a temporary partition between them had been removed. Students in Seoul could see and hear their colleagues in Ann Arbor or Delft, wave to them, laugh at their jokes. Voice-activated cameras automatically switched between locations, depending on who happened to be talking. Two or three highly sensitive microphones in each of the classrooms allowed students to speak in their normal tone of voice, further deepening the illusion of occupying the same physical space.

Throughout the semester students worked in small teams consisting of representatives from all 3 universities, communicating primarily via videoconferencing (each team could schedule individual sessions within the 30-minute time slots immediately before and after class sessions), e-mail, and Instant Messaging⁶. Their challenge was to research the various aspects of developing a global product in their respective countries: existing patents, manufacturing capacity, potential markets, differing electrical and safety requirements, even cultural preferences, and then to actually design the product. Deliverables in this course were: team presentations of the projects' progress in the middle and at the end of the semester, and a convincing display of the concept presentable to the public (including detailed drawings or 3D models)⁷.

Unlike the GIS course, this course gave students the opportunity to meet in person: at the end of the semester all would gather at one of the participating universities, where students would spend a few days finishing their team projects, making their presentations to the class, and mounting the public exhibit. (Not to mention a little bit of socializing and sightseeing.) In some iterations of this course, depending on available funding⁸, a get-together at the beginning of the semester would also take place, in order

⁶ A CMS-based course site was also provided, as well as a fairly sophisticated tool for real-time sharing of CAD (Computer-Assisted Design) models in 3D, but their usage proved insignificant with students giving preference to the richness and immediacy of videoconferencing, and to the convenience and familiarity of e-mail and IM chat.

⁷ The change in the product the students were asked to work on was also interesting: in the first GPR course it was a coffee maker. The assignment in the second course was an Internet-connected appliance. Finally, the instructors settled on a less proscribed requirement of a product that would be both affordable and useful in developing countries. This resulted in some really innovative and yet practical ideas, e.g. a bicycle-powered water pump.

⁸ This course generated quite a bit of interest in the industry, especially large, multinational corporations, where teamwork on a global scale and development of global projects have become the norm. This interest

to allow the members of the teams to get to know each other before they would embark on a semester-long work at a distance.

Better Than Being There

Obviously, each of these courses could have been taught independently at each of the participating institutions. It certainly should be possible to teach students *about* globalization without the challenges and costs of including students and faculty from remote locations. Just as - one would imagine - it ought to be possible to teach *about* medicine without placing students in hospitals and having them treat real patients. Yet this is merely giving students the information about something – with the implied expectation that they would take it at face value, and make some use of it in the future – as opposed to having them actually experience it first-hand and put into practice much of what they are learning right away.

It is one thing to be told that working in international teams at a distance poses a lot of challenges, and quite another to have to deal with these challenges in “real life”. This is one area where the “better than being there” quality manifests itself: it would be very difficult, if not impossible, to re-create the learning opportunities present in the aforementioned challenges, even if one were to gather all of these students from different countries in one place and distribute them into international teams. Let’s take, for example, the issue of time zones: students in Ann Arbor, Delft, and Seoul have to find a way to work around the fact that 11 A.M. in the first city becomes 7 P.M. in the second, and 11 P.M. in the third, meaning, that while the first group is just starting their day, the second has most of theirs already behind them, and the third would really like to go to sleep. The window of opportunity to work together as one team in real time narrows considerably, and yet this is exactly the environment in which a lot of organizations in the globalizing world must now operate.

Having students remain in their respective environments while trying to work with their counterparts across the globe makes quite a bit of difference in the way the various cultural variables (work ethic, individualism, courtesy, level of tolerance toward

translated into significant funding, which in turn opened up options (like international travel) that would otherwise be unavailable due to their cost.

“otherness”) influence students’ behavior. These cultural variables do, of course, have significance in settings where students *are* placed in a cultural environment different than theirs, but here the pressure to conform to the cultural norms of that different culture (“When in Rome, do as the Romans do”) is much diminished, so students are more likely to act in a more “natural” (to them) manner, thus exposing the other students to a culture undiluted by the desire to “fit in”. One would certainly hope that it promotes greater acceptance of different cultures, and gives students better tools of dealing with the differences.

Another benefit of expanding the virtual classroom, so that it accommodates students from several universities, is the increased access to resources for at least some, but often all, students. For example, the South African students enrolled in the GIS course were given access to electronic versions of their reading assignments, which would be very difficult for them to obtain otherwise. Their lecturer, who traveled extensively during the semester – between the universities involved, as well as to important conferences related to his research – would sometimes invite important guest speakers from the location he happened to be in; in one such instance, he asked a representative of an influential international organization to speak to his students, right from the floor of a conference in Cairo, Egypt. Thanks to the extreme portability of Web conferencing, all that was required was a laptop, a dial-up connection to the Internet (at 33.6 kbps), and a \$20 headset (headphones plus a microphone). Similarly, students in the GPR course listened to guest lectures from CEOs of several large corporations, including: Daewoo in South Korea, Whirlpool in the US, and Phillips in the Netherlands – a breadth of perspectives that would have been out of reach, had the course been split in three independent ones⁹.

One could continue providing examples of the value-added of these specific uses of online learning, but that would not change the main point we’re trying to make, that is: there are knowledge areas so uniquely suited to online learning that they position it beyond mere convenience (as in having access to quality education without leaving one’s home or office), beyond reaching “non-traditional” students, beyond augmenting classroom instruction with a palette of online tools – as a qualitatively different kind of

⁹ This in addition to being taught by 3 professors, instead of one

learning; the kind that is difficult to envision being done any other way, because it's better than any other way, better even than "being there". This is worth remembering among the now fashionable snickering about the grandiose visions of online learning that failed to materialize.

Vlad Wielbut currently serves as the Associate Director for Information Technology at the University of Michigan School of Information. Prior to this position, Vlad spent several years as the Community Technology Specialist in the Alliance for Community Technology, where he was responsible, among other things, for researching and promoting innovative uses of the Internet and related technologies. More information about Vlad Wielbut can be found at <http://www.wielbut.net/>.