

Towards a Hyper Campus: Innovative teaching for tomorrow

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For those who dream of a university with no exams, no lectures to large and passive if not inattentive audiences, current ways of teaching are obsolete. Confronted to a changing environment in which technology upsets both bonding and bridging processes on campuses, teachers are confused about their future. Off campus events, social networks, and permanent connectivity may be opportunities to improve their work conditions and the effectiveness of their teachings, or threats to their self-esteem.

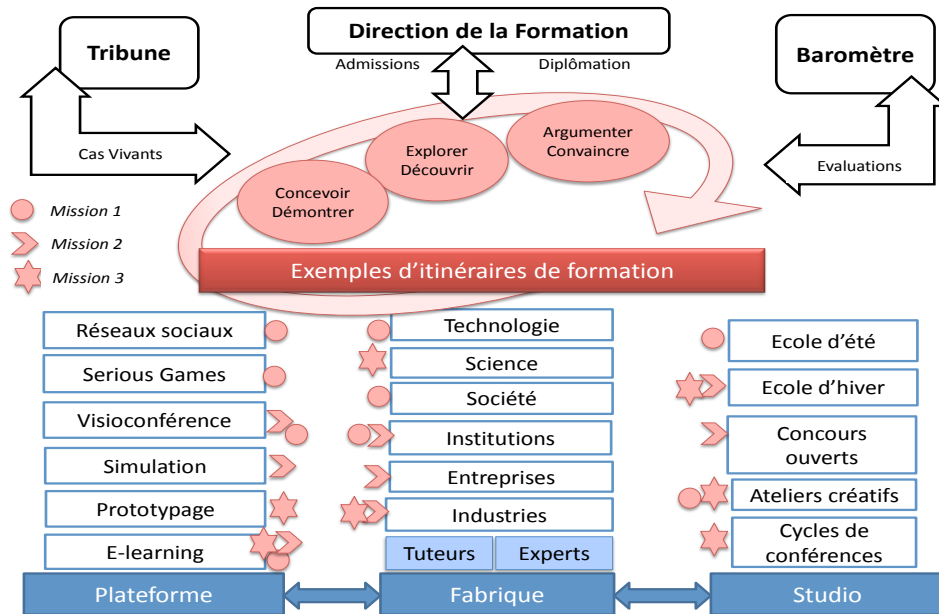
This is the very context in which came out in December 2012 the Hy' School project (for a "high", "hybrid", and "hyper" campus). Designed by a group of professors from three departments (political science, management, and engineering), its main aim was to fully turn existing processes upside down. Accordingly, it relied on flipped classrooms² (or reverse classrooms); remote teaching (via videoconference); hybridization of learning processes that would combine e-learning (i.e. hypertext), simulation games, and personal development (drama, music, eloquence week, festivals). Students-teachers' interaction would pass through various channels, with less face-to-face meetings, and more opportunities to greet outsiders. Tutorials would substitute class attendance. Auditoriums would only bring several groups of students together for special events (inauguration and graduation days; guest speakers; organizational work and planning sessions). On-line instantaneous debriefing and evaluation with follow-up measures would be active from the first day.

To reach these ends, five pillars were imagined, they are listed here in the very order in which they are depicted in the graph, although to understand their interactions one must prioritize them differently: the *tribune* and the *barometer*; the *platform*, the *fabric*, and the *studio* – not to speak of the unavoidable control tower, a division in charge of the whole process. It is of note that to be successful such a project must rely equally on each.

(Graph 1 about here: **The Organizational Structure of the Project**)

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² What is the Flipped Classroom? http://ctl.utexas.edu/teaching/flipping_a_class/what_is_flipped



The Fabric. Let us start with the core of the system: this is the place where students work together in small multidisciplinary groups of 4 to 6 persons, some being far away and working online, or through videoconference systems. A modular open space office is attributed to them at the beginning of each semester; they can make any material arrangements they like, and freely decide on their schedule since the Fabric is open 24 hours a day.

Their mission is to complete a report assigned to them by subscribers of the project, all known as members of a particular club, the Tribune (more on them below), with tools available in various guises (provided by the platform and the studio), which they have sufficient discretion to combine at will. Their mandate stems from a real life case (infra; “cas vivants”) that Tribune’s members must address (e.g. opening a new department, launching a MOOC, designing a CATI survey, shortening a bureaucratic process in a local public administration, reforming an organization or an NGO, campaigning for a political party, improving the efficiency of a governmental branch, evaluating a business model before it gets financed, selecting a humanitarian aid project, sending troops abroad, and so on and so forth).

Within the Fabric, students will assess the challenge to face, select the appropriate tools to succeed, and turn to professors for guidance and support at various points in time (either during office hours; using interactive application like Skype, Line, Google Hangouts, etc.; or intranet systems such as Moodle, Chamilo, etc.). Facts and sheets, as well as any necessary data and documents will be posted on demand on these platforms (see below). Once the contract between the School, the students of a single group, and their Professor(s) is signed, the goal is endorsed by academics, and the project approved by each partner, teachers just have to respond to student’s queries and feed the platform with appropriate materials. As a counterpart, students commit themselves to read any text or document posted by the professor(s). A supervisor belonging to the Division (see below) makes the related financial, credits, and time assessments that accrue to all

participants, including those outsiders from whom money and orders come (a public administration, a private firm, an association, an academic group).

Students opt for a strategy and design their own agenda. Weekly tutorials help them staying on tracks, deepen their knowledge on specific aspects, and test their arguments. In order to improve their performance they may learn drama, participate to eloquence tournaments, and any means to stay focused, control their fears, master their stress – dreams that come true within the Studio (see below). The closer they come to achieving their end and completing their report, the more support they get from their professor(s) and their supervisor. Lagging behind schedule, conversely, means less attention from the teacher and less assistance from the supervisor. It may also imply that the “course” will not be credited or, still worse, that the end-user will pull out from the project, with the financial consequences that will impact the School (a problem that has many solutions, like increasing tuition fees, imposing compensation in work for the library, or offering the frustrated end-user another free trial with a different group of students).

Of course, students’ agenda and timetable, as well as the organization of the group or lack of it, the possible division of labor or the absence of specialization – all these are up to them. Counseling and coaching may help them avoid likely waste of time, possible inefficiency and redundancy, as well as temporary breakdowns. Here again, professors and supervisors matter. They may verbally encourage students, carefully review their mid semester achievements, give adequate advice all along the way, etc. They set the countdown and deadlines and help students meeting them.

Once the report drafted, then reviewed, revised, and resubmitted to the professor(s), a rehearsal of its future defense in front of its end-user takes place behind closed doors. Selected attendants (the academic staff? Other students’ groups?) may all react and comment, suggest additional readings, experiments, or surveys, and give a grade.

This is what is now called a reverse class or a flipped class, with students preparing lectures and delivering them while professors listen. Evaluation comes from outsiders (they “buy” reports, ask for modifications, or express their disappointment, and reformulate their demand for the next session).

The Platform. A prerequisite of this new teaching framework is the availability of various supports needed to help students complete their work: selected textbooks, official documents, Internet links, articles and book chapters on the one hand; a highly performing visioconference and Web 2.0 flux of connections with peers all over the world; software for modeling architectural or technical projects, simulating decision-making processes, and playing serious games.

Of course, the first component of this platform – a database accessible via an Intranet link – is now a classic: Moodle paved the way to similar stockpiling and interactive systems for data finding. Such websites flourished in every single university over the globe. The novelty here is the tailored-to-the-needs aspect of this granary of data, permanently filled and revised by professors – a lot of work for those who hoped that machines could be good substitutes to personalized advices and once and for all recommended readings’ lists updated from one year to the next! The corpus made available to each group of students may overlap with what other groups may need, but

not necessarily so. Beyond the basics of each discipline (remember teams are multidisciplinary), such welcome overlaps may occasionally happen, but nothing is certain when the class first meets.

The second component of the Platform is the Game Center. To experiment, simulate, and rehearse, students may pick out various tools that are available to them, although this requires serious and constant monitoring that allows time slots, authorizes the use of costly software, besides watching the discussions run within the Intranet. Students from the school of engineering, architecture, or medicine, may build prototypes and test them to give some guarantee that the real size project is workable.

The Studio. One of the most exciting innovations of this project is the invitation made to the students to improve their argumentative capabilities through a crash training in rhetoric and body language: drama, opera, dance, eloquence – all these “arts” are henceforth added to “science” to boost the convincing impact of the projects presented to various audiences.

In collaboration with professors and supervisors, students would also invite guest speakers, organize special events, and even demand for planning additional courses (noteworthy, summer schools), even though some may have little explicit relevance for their tasks.

The Barometer and the Tribune. To establish and consolidate the relationships with outside stakeholders –such as public administrations, research centers, think tanks, international organizations, and firms– among which sponsors, the press, and end-users, these two bodies are essential. Firstly, they collect yearly subscriptions, registrations to special events, grants and scholarships. Secondly, they give on-line and nearly “live” evaluations of actual progress, critics, demands, and comments made by partners. Thirdly, they make periodical satisfaction surveys. Finally, they organize face-to-face meetings to which every registered person or institutions may participate.

To put it briefly, the Barometer gives instant assessments of scores and deadlines, whereat the Tribune offers a unique place to make supply and demand meet, and give maximum visibility to confidential projects.

How does this work?

Suppose a regional authority of a developing country is assessing the feasibility of a participatory democracy experiment, modeled after the 2004 British Columbia one, with the particular purpose to train candidates and voters to play the game by the rules. The demand is to tell the steps and the calendar required, design the appropriate framework, and also evaluate the costs and benefits expected as well as the risks taken – if only, to deceive electors. Once composed of professor(s), supervisor and monitors, as well as students from various origins, the “participatory democracy” team has withdrawal rights over a stock of data imagined for its special needs. Its members may test their ideas on a reduced sample of other students or outside volunteers who will simulate a public debate on any issue of the real life agenda; they may organize visioconferences with experts worldwide to collect their views and make them tell their singular experience with participatory designs. They may reshape the architecture inherited from the 18th or 19th century to make it suit better the particular context in

which the project will be implemented, imagining dedicated buildings, improving electronic votes, facilitating discussions with experts during the hearing sessions that will help participants to make up their mind about the technicalities of the problem raised, etc. This would require fluency in communication technology; comparative politics with a special stress on the history of the suffrage and/or the theory of democracy; psychologists able to tell how to make participants the most able to argue sincerely, with no hidden agenda, and how long (coming to a close too early or too late is of the essence when the very legitimacy of decisions is at stake), as well as to identify possible allies to rally and adversaries to block before making a collective decision on, the issue at stake. Since the project is to be implemented in a developing country, anthropologists or specialists of the area may help. Because it has a cost, an economist may tell what is the appropriate business model to make the experiment come routine and be sustainable in the long run, without further assistance or monitoring. Finally, students trained to address international organizations topics will be welcomed, because such schemes would inevitably be developed and followed up by one or several intergovernmental and non governmental ones.

When the semester starts, each team will identify its special needs, and organize its time schedule (an excellent opportunity to learn about scoreboards, logical frameworks, and grids that are extensively used in management). Supervisors will provide the resources. As said, professors will tutor the students once or twice a week, instead of teaching hours-long classes in front of dozens of persons more or less focused on his or her lecture. At some points, participants would feel under-equipped to confront professional experts and “sell” them their work: support would be expected from the Studio, with its catalogue of on-demand performances and training sessions.

Day-by-day, progression towards completion to the satisfaction of all participants in a project will be watched out by the barometer people; supplementary facilities and funding may be raised via the Tribune. Eventually, defense day brings together all the stakeholders in a single room (some via a visioconference system), and credits accrue to the team. In the end, semester-by-semester students graduate from the program and their achievements are posted on the program’s website (once the embargo on the data collected is waived).

How to make the best use of this framework?

It is of note that teams may (should?) be competing on the same project – although it will dwindle the amount of resources available for the same end. Awards could gratify the best projects, either among rival teams, or across students’ groups working on different projects at the same time. Moreover, professors will share the fate of their tutored students, evaluating their pedagogical achievements will no longer be necessary.

Within such a framework, innovators are awarded with symbolic as well as material benefits. Teaching is improved because the less involved soon emulate the pioneers’ work. Autonomy grows, because learners, teachers, and people who manage the support system are on an equal footing – and paid accordingly. Relevance also increases, as partnerships multiply. Funding expands, due to the inclusion of outsiders at an early stage of research. Pedagogy and research are linked to an unknown extent.

If this is not paradise now, it very much resembles a brave new world. At the very least the professors' nightmares (decline in academic authority, possible irrelevance of the field invested, lack of attractiveness, and lack of resources) will be erased if not deleted.