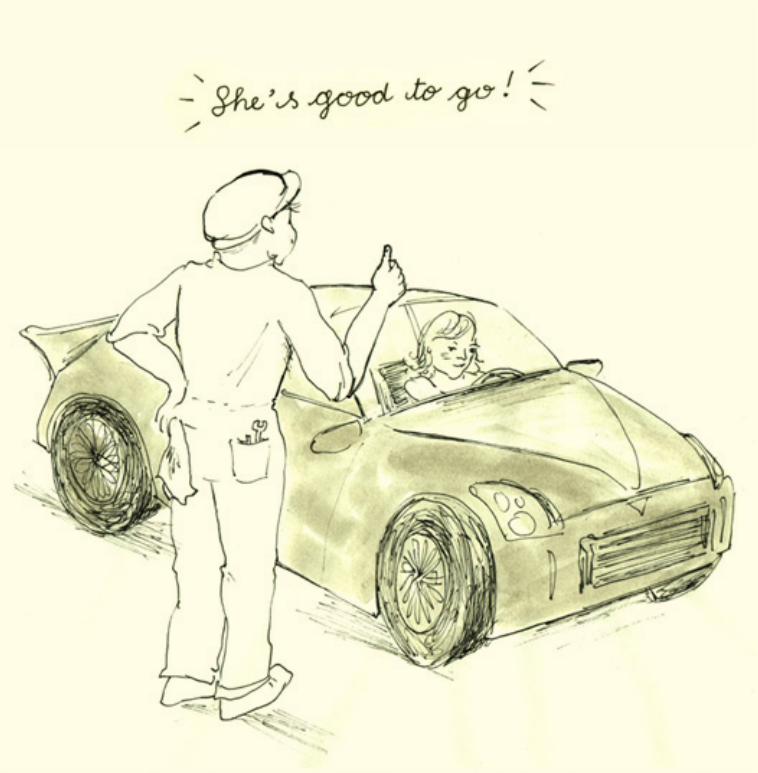
CASE STUDY 4

Getting Off to a Good Start



Case Characteristics

While this case had some characteristics in common with the previous three, it also had some significant differences. These characteristics are summarized in the table below.

Table 9: Characteristics of the subject matter expert

Gender	Rank	Reason	Time	Availability	No. of sessions	K/ Design	K/ DE	GO/ SO
F	ASC	O	1	1	5	3	2	2

Gender: female
Rank: ASC = associate
Reason: O = organisational
Time-to-delivery: 1 = course already begun or is about to begin
Availability: 1 = minimally available (1-15 hrs)
Number of sessions = 5
Knowledge of Design 3 = advanced level
Knowledge of DE: 2 = tought three or more DE courses
General Obj. /Specific Obj.: 2 = GOs only

In terms of similarities to the three previous cases, this one also involved a female professor who was participating in the design process for organizational reasons. She faced the same time constraints as the others: her course was about to begin (1), she had little availability (1) and only five working sessions took place (5). In contrast to the previous three cases, this professor was at the mid-point in her career (ASC) and she had deep knowledge of instructional design (3) and of distance learning (2). Also significant was the fact that, like her colleagues, her reason for participating in the design process was organizational (O). This led her to view the design process as an additional obstacle in her already very busy schedule. She told me she wanted to "get it over with as quickly as possible." (I got an inkling of what it must feel like to be a dentist...). This statement set the tone for our work and constituted a significant constraining factor in the design of her course.

I had had the opportunity to work with this professor on other projects so at least that was running in our favour. She was in no way new to instructional design principles, having once used an earlier version of my model to construct a previous course. As for the case under study here, she already had a course syllabus because she had already taught this

course on campus. However, by the time we met for the first time, the course was about to begin. Consequently, we had to start our design work by addressing the most problematic aspects of her course. As a result of her limited availability, we did not anticipate being able to meet more than four or five times.

Before our first meeting, I asked the professor, as usual, to send me a copy of her most recent course syllabus. I also picked up the other syllabi in her program and sent her a copy of the latest version of the working grid I had developed for Case 3.

Session 1: Our first meeting took place under stressful conditions. The professor was obliged to start teaching her course at a distance without the support she felt she required or the time to properly put it all together. This situation had resulted from the same type of university agreement discussed earlier, which the administration had been passed down to faculty a *fait accompli*. In addition, according to the professor in this case, the university had promised to provide pedagogical and technical support well in advance but had not done so. (According to another source, the professor had not asked to use the resources available.) Consequently, the course was about to begin without the professor being ready to deliver it at a distance, which had obviously engendered feelings of frustration on her part. As a result, she was quite on edge, which did not bode well for our upcoming work.

We began our session by reviewing her current course syllabus together. It was built according to the typical vertical pattern, containing a list of themes, bunched general objectives and compulsory readings. Having already studied it ahead of time, I pointed out that there were no specific objectives. The professor explained that she had not had time to write any but that she would like to do so. We therefore reorganized the general objectives, distributing them throughout her course and linking them to specific themes. Afterwards, we returned to the list of themes and identified, according to the proposed readings, sub-themes which would be studied in the course. This brought us closer to identifying the specific objectives.

Having identified the sub-themes for each week (of course, still in a provisional state), we returned to the series of readings proposed for each week. I noticed that there were too many readings for some weeks and an

insufficient number for others. Seeing as she had brought all the readings along with her (copies of all her texts and articles), I proposed we go through them and reassess her weekly redistribution, perhaps reordering them from most to least important. I then asked her to tell me about the contribution of each text to her students' learning and their meeting her course objectives. As she explained the relevance and importance of each, I was able to jot down a list of potential specific objectives, which we then analyzed and modified accordingly. Where there were too many texts for a given week, I asked her which texts were essential and which ones, although interesting, were not absolutely necessary. I wanted to find out which ones linked up with the objectives and which ones did not. We got through her readings and established a quantitative limit of 50 to 75 pages of readings per week for the easier texts and a 25- to 35-page limit for the more difficult ones. This task was difficult and tedious for the professor but she was aware that it was important because she knew that she had not distributed the readings to suit her student's cognitive processing capacity. Our session ended with my explaining a method for identifying specific objectives (see below).

In cases where professors have difficulty writing out their specific objectives (SO) but where they already have student performance assessment instruments (i.e. tests, exams) developed, I recommend, as mentioned, "reverse engineering" (see Figure 2), that is, writing SOs which are derived from exam items.

In cases where a course has already been taught, professors have exams, exercises, assignments or projects with specific guidelines. These assessment instruments are the end-product of the instructional process and, consequently, representative of a professor's true intents and thus indicative of his or her specific learning objectives. Using performance criteria as it appears in the exam items, one can then establish, by induction, a course's specific objectives. Reading through the exams, it becomes a matter of identifying the specific objective targeted by a given question. As specific objectives are more general than objective exam items (Morissette, 1984), some of these exam items usually have to be grouped together to be able to identify a given specific objective. However, when it comes to items which are more subjective, each item may target either a general objective (GO) or several SOs. (The more objective items are usually simple

test items such as multiple-choice questions while the more subjective are "complex production" questions (Scallon, 1988) or essay questions.)

As can be seen in Figure 2, closed-end exam items depend on specific objectives; that is, they are always written on the basis of a given SO. For open-ended exam items, such a claim cannot be made because the item can, in the case of an essay question, often equate to a general objective.

The guidelines for individual or team assignments are often another source for specific objectives. Of course, as with exam items, these guidelines are usually too precise to be turned into an objective per se*; however, some extrapolation is usually possible.*

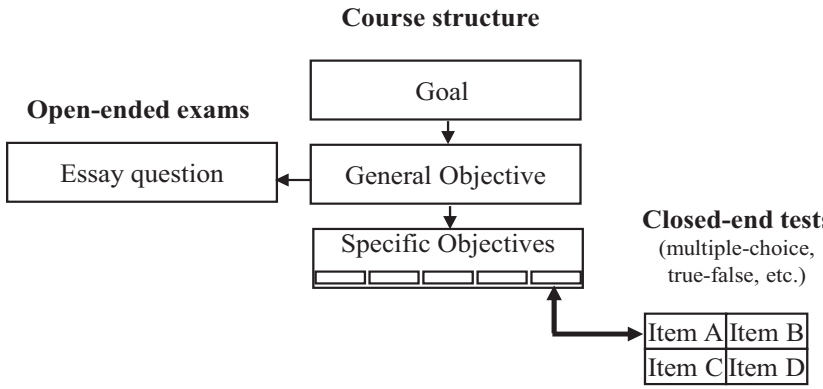


Figure 2: Writing specific objectives using reverse engineering

Session 2: At the professor's request, this session began with a discussion of the way in which she intended to evaluate her students' performance. She had already identified, in a general manner, the assignments on which students were to be evaluated.

Assessment instruments / Marking Scheme	
Assignment 1: Critical summary of a text	20 %
Assignment 2: Team project on (...)	20 %
Assignment 3: Creativity project on (...)	15 %
Individual Assignments	30 %
Team Assignments	15%

Continuing on from the previous session, it was now time for her to clarify a certain number of elements in her course, including the nature of the activities and assignments she had planned as well as their integration into the course schedule. After some discussion, we thus decided that assignments 1, 2 and 3 would be due in Weeks 5, 10 and 14. As for the individual reading reports, I suggested writing out a mix of open-ended and closed-ended questions to guide students through the ideas presented in the weekly readings. As for the team assignments, I proposed writing a series of open-ended questions of several types, including factual, inference and application questions. These types of questions target discussion and negotiation of meaning in a constructivist sense (Jonassen et al., 1999) and encourage hierarchical knowledge assimilation (according to Gagne, Briggs & Wagner, 1986). Each individual assignment would be worth 3 points and each team report would be worth 1.5. Students would send their completed assignments to the professor each week by email and she would mark and return them by email. She later decided that, to decrease the amount of email she would have to handle, students would simply deposit them in the Assignments box on the course website.

> *Dividing up points in this way is a double-edged sword: it may encourage diligence on the part of the student and result in more structured learning but it also requires meticulous follow-up by the professor. The issue of finding the right balance comes up frequently in instructional design. On the one hand, most professors want to offer a quality, structured course to students as well as provide them with a high level of learner support in the form of written and verbal feedback. On the other hand, they are usually overwhelmed with research- or service-related tasks and responsibilities. Providing higher levels of structure in their courses as well as offering quality learner support while meeting research-related commitments is illustrative, for many faculty members, of King Solomon's dilemma.*

We then discussed how teams would be formed in her course. We decided that students should chose their own teams of between two to five members (depending on course enrolments) and that they should meet at least once a week to exchange information on the individual & team assignments. A spokesperson would be appointed for each week of class

who would then be called upon to summarize their findings in class. A general discussion led by the professor would follow.

We then decided to look at her assignments and the questions therein based on her required readings to see how much "retrofitting" would be required. To simplify matters somewhat (considering that her course was about to begin and she felt that writing out questions would be time-consuming), I told her that her questions could take the form of a weekly quiz, using the quiz tool in the LMS. I reminded her that, while closed-end questions took longer to develop than open ones, they could be correctly automatically, which would save time during course delivery. As went through her readings, we thought of questions, knowing we could refine them later. After one hour, using some of her original questions, we had written the alternatives (the distracters plus the right answers) for her first quiz. She felt confident she would be able to develop further quizzes, even if it meant doing so while her course was in progress, by keeping a week ahead of the students. She said she would write the questions up and ask the Instructional Development Coordinator (IDC)to post them on her website, at least until she learned how to do so herself.

> *This reminds me of* rapid prototyping *(Tripp & Bichelmeyer, 1990) and* just-in-time instruction *(Schank, Berman & Macpherson, 1999), two concepts prevalent in design literature. The possibility of developing a quiz on-the-fly for immediate posting on the Web via an LMS has opened up new possibilities for professors who, because of their numerous professional responsibilities, often do not have enough time to do as much planning (*front-end design*) as they would like. The advantage of using an LMS is that they can develop and modify assessment instruments at the last minute; the disadvantage is, because they can do it at the last minute, they often do and the result is, at times, less-than-adequate instruments for evaluating student performance.*

Towards the end of this working session, we began developing a series of open-ended questions for the team assignment based on the same reading, which took us about half an hour. It was not very difficult given the fact that the professor was very familiar with her readings and knew which questions she wanted to ask, having asked them orally in previous

courses. She now had models to follow to develop other individual- and team-oriented assignments.

Session 3: I returned to her course syllabus and asked how far she had gotten in writing her objectives. She told me that she didn't intend to write them because she felt that the questions in the reading assignments were sufficiently detailed and that the students would easily understand what they were expected to do each week. She also told me that she was completely overwhelmed with other work and that writing objectives was not a priority for her.

This unwillingness to write objectives is not new: I found it in the previous three cases. I believe that this type of reaction is, considering a professor's workload, perfectly normal and understandable. I am starting to wonder to what extent Dick & Carey's theoretical model (1990–2007) takes into account how course design is done in the "real world" of higher education. The approach proposed by D&C is quite prescriptive, stringent and precise. Either you adhere to it or you don't. As mentioned, Tessmer & Wedman (1990) speak of "layers of necessity" in design, that instructional systems are to be developed according to what is required of them; that is, one can, as painters do, put on an additional "layer" (i.e. coat of paint) or not! As an instructional designer, I constantly find myself in situations where I am forced to make compromises, maybe even betray basic design principles to some degree, just so that I can move forward with the process. Why? Because we live in a world where not everything goes according to plan, and sometimes things happen for no apparent reason, quite simply because we have neither the time nor the means to make sense of it all, to make it conform to the standards of our profession. It seems an ID's work and degree of influence have always been and will always be reliant on his or her working environment. As I've mentioned, IDs are still a novelty in dual-mode universities and no one really seems to know who they are, what they do or how they fit in with everyone else involved. In their quest to improve the quality of the instructional process, they must "brave the high seas" of higher education, all the while being careful not to make too many waves in the process. Quite the challenge indeed. Consequently, I have come to envisage design as an iterative process, which can be incrementally

improved, but which is always ipso facto *incomplete, imperfect and fragmentary.*

At the professor's request, we moved on to discussing the creativity assignment that she wanted her students to do. She intended to give them complete freedom. (As an ID, I had concerns about the "complete" part.) We discussed various project guidelines which would give them this freedom but also provide basic guidelines (which would make her marking easier). I suggested several assessment instruments such as log books, scrapbooks (a photo album or texts, artefacts, etc.) or portfolios, ideally virtual, which would allow students to reflect on the knowledge they had acquired, while drawing upon the texts they read and weekly discussions with their peers. They would be able to piece together associated elements which came to mind or which were illustrative of a key concept or of a practical application of a given theory, as seen in class. Since her students were, for the most part, working professionals in her field, she felt that this type of activity would be highly beneficial to them.

In my experience, this type of exercise is indeed valuable because it encourages students to draw upon their own personal experience to complete a task, which in turn requires them to internalize their reflection. Afterwards, they discuss what they've done with the group and this prompts an even higher level of knowledge construction. This reflection came to me as a visual representation, that of a swimmer who dives deep to speed along, then comes to the surface for air. In the same way, the learner introspectively dives deep within, and then comes up to share what she or he has found with the group. Later, I drew a GR of this idea, reproduced below (Figure 3).

We then moved on to discuss team assignments, the advantages and disadvantages of having them, and the ideal way of developing them. Earlier, we thought that teams should be made up of 2 to 5 students depending on the numbers enrolled. Here again, we faced what was ideal versus what was feasible. According to the professor, teams of two worked the best, yet small teams meant more teams for her to manage and more marking, follow-up, and assignment structuring. I concurred; there was a trade-off to be made. In the end, we agreed on a maximum

of 6 teams of 3 students (since this was a graduate course). If there were more than 18 enrolments, we would increase the number of students per team, as needed.

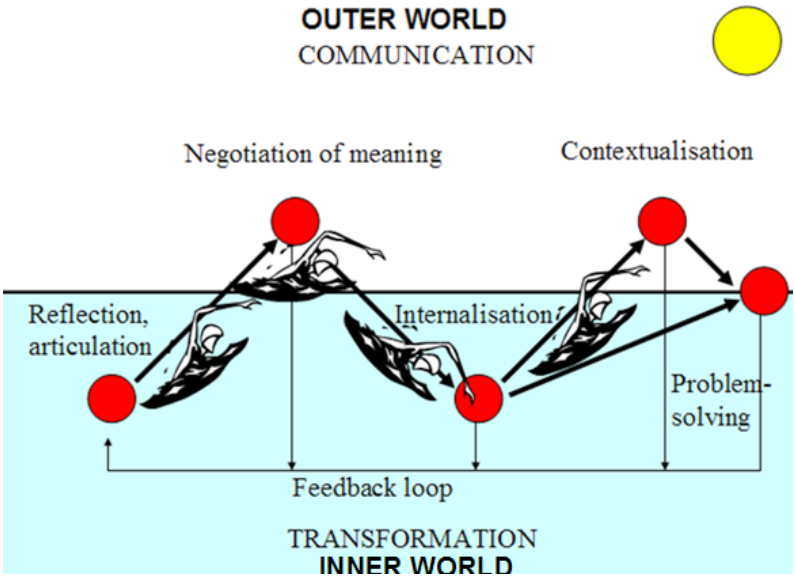


Figure 3: Moving between the inner world of transformation and the outer world of communication

Note to self: what is best for students is not necessarily what is best for faculty. This case shows the importance of balancing the needs of students with the limits of faculty (see Figure 4). Students hope for ideal learning conditions just as much as professors hope for ideal teaching conditions. The only solution is to find some middle ground which insures acceptable conditions for all. Indeed, finding this fair and equitable "middle ground" seems to me to me to be one of the biggest challenges in higher education.

The professor then asked me how to distribute the workload required of her students. I explained the four basic models I had observed faculty used (see Figure 1) and I recommended she consider either model B (assignments start out slowly, build to a summit towards the middle of the course, then gradually decrease the requirements) or Model D (a

steady level of assignments required of students and a corresponding level of marking by faculty). To sum up, given her decision to have weekly assignments and to allocate points for them throughout the term, model B seemed to be the most advantageous to students and faculty.

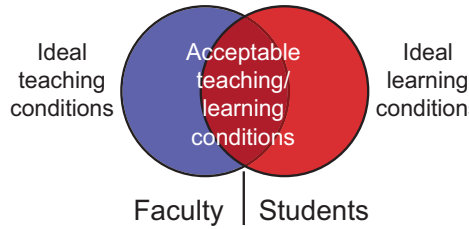


Figure 4: Ideal teaching vs. ideal learning conditions: The challenge of finding a middle ground

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To promote student involvement in the course and in the hopes of sustaining enrolments (based on one of Moore & Kearlsey's (2004) numerous and useful recommendations), I suggested that she require that a weekly assignment be handed in during the initial weeks of the course and that she provide immediate feedback to students with regard to that assignment. An added advantage of this was that students would be free, towards the end of the course, to concentrate more time and effort on their artistic project.

At this point, the professor asked how she would conduct her plenary sessions and the linkage between individual and team activities. I explained that, according to the design model we were using, the plenary sessions were primarily aimed at learner support: a time for direct dialogue between professor and students, rather than a time for lecturing. The aim of the selected readings and the assignments they

were to complete, either alone or in teams, before to coming to class were to prepare them for the plenary session. I also explained that if she had a PowerPoint presentation to which she would like to add a soundtrack, all she had to do was get the Instructional Development Coordinator to show her how to do it. She could even do this from her own work station. Afterward recording her sound track, she could send it to him and he would upload it to her website. In this way, she would be able to provide her students with a valuable teaching resource before to her plenary sessions. That would allow them to access her lecturing at a time of their choosing. By proceeding in this manner, more class time (via videoconferencing) could be spent discussing and deepening their knowledge of key concepts through questions and answers. I then showed her an example of a PowerPoint presentation with a soundtrack I had done myself.

> *I have already used* RealPresenter*,* Camtasia*, and then* Captivate *on numerous occasions, such as when preparing tutorials for faculty development. Having a collection of PPT slides ready, I sit down at my work station, put on my headset and record the soundtrack. If I'm not satisfied with my presentation, I can go back over any portion of it and edit it. After that, I save it in an accessible format (such as* QuickTime *or* Windows Media Player*) and add it to my website. There it would remain unless I needed to revise it, at which time I would open the original document, make my changes and then save and post the new version. Again, the main advantage I see here is a shift from reliance on purely synchronous mode (via videoconferencing) to the availability of both synchronous- and asynchronous-based resources. An activity which was previously only available to participants in a session was now accessible asynchronously to anyone to whom access was given. The addition of this kind of didactic resource meant that faculty could, in theory, now devote more time in synchronous mode with their students (during weekly videoconferencing-enabled sessions) to discussion and interaction rather than to lecturing. Of course, they still had to find time to do the recording but, once it was done, it was money in the bank. I could feel a sea change was in the making.*

The professor concurred that this arrangement allowed for a better distribution of activities and she eagerly looked forward to the possibility

of having more time to devote to discussions with her students. As for her fear of not having the time to prepare her slide presentations and record soundtracks, I explained that all she had to do was simply take matters one week at a time. Every resource she developed was an investment in her course that could be used over and over, or edited as required. Moreover, the coordinator would be there to help her during her initial recordings. She already had several PowerPoint slides on the course's contents that she had made the previous year. The stress, like fog—the fog of design—was starting to lift.

Session 4: During this working session, the professor returned to the idea of developing PPT slides and recording soundtracks for her students to listen to before the plenary sessions. She stated that these PPT presentations would allow students to complete the individual and team activities more effectively. She expressed her growing interest in doing things this way and said she had a number of anecdotes she liked to share with students in class. Such anecdotes allowed students to get a better understanding of contextual factors involved in a given subject as well as benefit from the experience of others but these were often among the first things to be omitted when of class time was short. Since a significant portion of her teaching could now be done before she even saw the students in class each week, she now hoped to be able to reincorporate these undocumented anecdotes and real-life stories into her plenary session discussions.

The professor then wanted to discuss her weekly readings and the general manner in which her course contents were presented. She explained that as her course was based on certain basic, underlying concepts, she had anchored it in the idea of *organic emergence*. The whole course revolved around this notion, presented in the form of a tree diagram that illustrated the evolution, interaction, mixing and the relative position of these concepts with respect to others as well as the schools of thought from which they had sprung. Where did these concepts come from? What had been their influence on such and such a time and place? Where are we at now in terms of these concepts? What about these concepts in the United States and Europe? Because the course had a significant historical component, we began exploring different means of representing these

concepts visually to facilitate their acquisition by her students. Some of the concepts, she felt, were difficult for students to grasp.

I proposed a diagram on the origin and progression of one of these key concepts, seeing it as a stream meandering through rough terrain, meeting with various obstacles and subsequently branching off at various places. We pictured it meeting up with other streams (or concepts) to form a river, at times forming a lake but eventually joining a bigger river which finally flowed into the ocean. This metaphor appeared to convey the evolution of the key concepts in question and the professor, having never seen anything like it before, was extremely happy with it. We pictured developing other analogy-inspired GRs such as the pyramid (to illustrate the effect of building from the ground up) and the iceberg (to show how, in one of her concepts, one part is visible to the user whereas a larger part is hidden). In doing so, we came to understand the degree to which higher-level objectives ("cognitive strategies" according to Gagne) could be promoted using GRs that would be discussed during plenary sessions. I explained to her the GR's pedagogical role as one type of *advance organizer* (Ausubel, 1963); i.e. how a diagram can serve as a mental model (Gentner, 1983) and open up a path, through visualization, to a higher level of understanding. This discussion led to another, i.e. the link, at least in my mind, between activity types (individual, team and plenary) and Bloom's (1984) taxonomy of learning behaviours (see the pyramid analogy-inspired Figure 5 below). At the end of this session, I explained to her that, by building a course syllabus in such a way that individual activities feed into team activities which then feed into plenary sessions, she would be constructing a hierarchy of learning activities & events that would likely improve knowledge construction "through layering" for her students.

"Layering" here is used in a Tessmer & Wedman (1990) sense (as in "layers of necessity"), meaning that students move from one layer of activities (developed according to their needs but also in taking into account available resources) to the next (i.e. from an individual activity to a team activity to a plenary session activity), the latter always being more complex in terms of interaction (Anderson, 2008) than the former.

Another important skill that she wanted her students to acquire was related to ICT technical ability, to wit, mid-level mastery of PowerPoint. The burgeoning integration of ICT into the professional environments where her students were working or would be working was of such high importance that she decided to make it a general objective of her course. We discussed this objective's impact on team creation and team activities. She made a mental note to inform teams that they should include at least one student who had working knowledge of this software. For the more experienced students, a general objective related to helping train other students was added, specifically for them. She planned to offer a certain incentive to those students who accepted to do this, perhaps the omission of an assignment or some other element to be determined during the course.

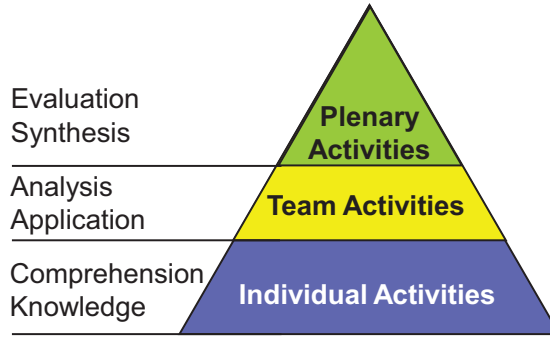

Figure 5: Bloom's cognitive domain taxonomy in relationship to course activities

Session 5: With her teaching strategies for the most part established and with a few initial assessment instruments identified, even partially developed, we began this session by talking about student support strategies and what means were available to her. Because the course was being offered at a distance, the professor was worried about her ability to support her students in the way she was used to doing. Aside from weekly videoconferencing and email, she had not thought of any other ways. At that point, I suggested she set up an online discussion forum in the LMS. A discussion forum would enable her to lead a discussion in asynchronous mode and allow her students to interact and support one other. She told me that forums were something she had heard about but had never used. In terms of added workload, she was not exactly sure

what implementing one would entail. She also inquired about using the chat function. I explained the difference between using a forum and a chat and then took her to a site with discussion forum in which I was a participant. There I was able to show her how a forum actually worked and what it might involve in terms of commitment. We then toured a chat site, the workings of which I also explained. I also informed her that, pedagogically speaking, the forum was by far the more useful tool of the two because users could access it at a time convenient to them. Chatting, on the other hand, required a real-time presence by users, making it more difficult to arrange. Pedagogically speaking, chat sessions also had the potential to become quite chaotic when more than a handful of people participated.

We then returned to the forum in which I was a participant. It was a small forum of about 40 participants, mainly designers. I explained that some people posted messages more frequently than others. In addition, participation seemed to depend in large part on the subject being debated. I explained that it was a good way to get students to communicate among themselves, to encourage them to help each other out and, quite simply, to have them interact (Fahy, 2003). Moreover, she could use the site as a kind of bulletin board for her course. She was interested in the bulletin board idea but, as for the forum itself, she was afraid of simply not having enough time to participate in it regularly. Nonetheless, she did find the idea of a weekly debate so interesting that she decided to write out and post a series of questions on weekly course readings, to serve as potential topics for debate. Even though she would only look in on discussions as her schedule permitted, she felt that this would hopefully promote a heightened level of peer-to-peer interaction. She also saw that, for some teams, the forum could also be a way to carry out certain team assignments. Indeed, each team, in addition to having access to the general forum, also had the possibility of setting up a forum intended for its own members only.

The virtual discussion forum, despite the fact that it is rapidly becoming a well-established fixture in higher education and one of the Internet's true gems, is nevertheless, pedagogically speaking, a new medium for a lot of faculty members, especially for more senior professors. The forum fulfills a need which has long existed in distance learning: for students to establish

a group identity and exchange freely with one another without space-time constraints. Of course, in order for it to work, the forum requires active participation, ideally, of all students as well as their ongoing involvement throughout the course. I have also found that, unless forums are organized according to set themes (threads), debates can become chaotic and unbeneficial to students. One final drawback to the forum is this: most of the professors with whom I have worked have never used a forum (even fewer have used a chat tool, not to mention a wiki or a blog). What's more, they have neither the interest nor the time (the lack of the former seems to be due to a lack of the latter) to learn how to use/manage a forum. This brings up the whole issue of faculty development in IT, their growing needs versus their severe time constraints and the conflicts involved therein.

A further note on the forum's synchronous mode counterpart—the chat—as I mentioned, I don't see any valuable pedagogical application for it, especially when large groups are involved. It does of course enable two or three individuals to interact quite effectively as a small team; however, in my experience, once the group reaches four or five, dialogue tends to become quite disorderly, confused and difficult to follow. For this reason, I do not encourage its use in officially-sanctioned activities. On the other hand, now that we have tools like MSN and Skype for multiple, online audio discussions, written chatting seems already to be a thing of the past, a short-lived technical innovation which has come and gone, almost overnight.

We continued on with a discussion on her using the synthesis grid for the presentation of her course, her course activities as well as her course schedule. As mentioned, her syllabus, at that point, was based on the vertical pattern, with no clear indication of what students were expected to do each week. After studying the grid, she agreed to use it. We then began transferring the components of her course directly into the grid. As we did this, it instantly became clear what activities would take place each week. At the same time, we were also able to identify empty spots where extra activities would have to be developed. After talking things over, I recommended putting her grid directly online, i.e. creating a Web site for her course on the institution's online platform so that it could be used as the home page for her course. We would then be able to set up direct hyperlinks between the grid and digital documents such as readings

or student assignments. She told me that she would talk with some of her students to see what they thought about the idea and get back to me. I made a note to ask the Instructional Development Coordinator to post a grid on a test site and set up some hyperlinks to a few texts and documents so that she could try it out the next time we met.

As I mentioned, the synthesis grid is structured quite differently from traditional course syllabi, which are mainly vertical. The course is not divided into modules or units of unspecified duration but is strictly linked to the actual time available for each class period: one week. As with most courses, the one under development was a typical 3-credit course, giving it a maximum "seat time" of 45 hours, spread over 15 weeks. The grid was thus divided horizontally into columns identifying the various course components (objectives, content and activities: individual, team and plenary), displayed along the horizontal axis to create a continuous link between every component. Vertically, the grid was divided into temporal units corresponding to each weekly class. This continuous link along the horizontal axis is usually missing in the traditional course syllabus, or the vertical course syllabus, as I like to call it.

The connection between design theory and its implementation which resulted in my developing a working grid seems to me perfectly natural. I have already decided to abandon the original design model in favour of this grid, which seems to better assist professors in their thinking and course planning. Indeed, I'm noticing that course design activities have really started to take off. Another thing I've noticed is that I've stopped calling the grid a synthesis grid (rather awkward to begin with) preferring to label it a "horizontal course syllabus" (HCS).

In hindsight, I see that the precise distinction that I sought to make between so-called teaching, learning and assessment activities was mostly of theoretical interest rather than universal interest to faculty and seemed to even represent an obstacle in the design process. From now on, I intend to speak to professors about the horizontal course syllabus (see Figure 6), placing particular emphasis on the development of weekly activities and linking specific objectives, individually, and content to such. In doing so, we will be able to concentrate on developing activities one week at a time.

As I forge ahead through the process of migration from on-campus teaching activities towards course design, development and delivery at a

distance, I am becoming aware of faculty's fundamental need to uphold the same academic standards and maintain the same flow of activities to which they are accustomed with a traditional on-campus course. For instance, a professor is typically willing to spend approximately three hours per week "delivering content" and he/she expects students to carry out about six hours of study outside of class, either individually or in teams or a combination of both. This adds up to a total of nine hours of activities per week for a regular 3-credit course. In light of this crucial factor: time, I am now starting to see the implications of such on a larger scale and to better envisage the activities involved:

- *the in-class "teaching activities" from the professors' point of view: the three hours of weekly "seat-time" corresponds to the various activities estimated to take faculty and students approximately three hours to complete during a plenary session, such as faculty- or student-led discussions, debates, in-class assignments, etc.*
- *the before-class "learning activities" from the students' point of view: the estimated six hours of various activities that students are expected to complete and which could include: compulsory readings (books, articles or lecture notes) which the professor has provided to students, either as a hard copy or electronically; individual or team exercises to be completed based on course readings or on Web sites; online discussion forums, listserv-, email- or forum-based messages to be written and consulted; PowerPoint-based lectures, possibly with a soundtrack, and including other elements such as 2D or 3D animations; other audio (MP3s) or digital video Internet-based documents (YouTube), etc.*

A few months have passed now since I asked the head IDC to look into finding publishers who already have ebook versions of their books (or parts of them). I also asked him to explore the possibility of reaching an agreement with other publishers who had none on digitalizing texts and posting them on the Web (in a secure mode, of course, protected on the asynchronous platform by password-controlled access). In that way, students would only have to pay for a subscription to a given book, or even a part of a book, rather than having to buy a paper copy. Moreover, this type of arrangement would be great for professors because they often wish to use only one chapter in a given book. They would be able to customize their course readings and have students pay for a subscription to that chapter. Initial findings by the

IDC has turned up a few publishing houses which appear to offer some of their books in a digital format and even allow faculty to extract chapters here and there and thereby compile their reading list. Others, however, appear to have never even heard of such a possibility (especially French-language publishing houses); still others have even expressed hostility (in some cases, scarcely-veiled threats) to the very idea. For books whose intellectual property rights have expired or those which are already in the public domain (i.e. government publications, etc.), it appears one is free to use them without having to worry about copyright issues.

The role of publishers, publications, and property rights seem seems poised for revision as knowledge becomes more globalized and increasing pressure is exerted by the public to have free access to it, especially to research findings published by academics that, directly or indirectly, are paid with tax dollars.

The Horizontal Course Syllabus Grid

Course title: _____ **Course number :** _____ **Professor Contact Information** **Name:** _____ **Phone number:**_____ **Fax:** _____ **Email:** _____ **Office location:** _____ **Office hours:**	**Faculty** _____ **Department** _____ **Program** _____ **Calendar:** Start _____ End: _____ **Website:** www.youruniversity.edu **Virtual Classroom site:** www.yourvirtualu.edu **Weekly classes** on _____ **From** ____ **to** _____.

Main objective(s) Understand the terminology and concepts linked to ……

Specific Objectives	Content or Themes	Individual Activities	Team Activities	Plenary sessions
- Define…	- Definitions…	Read Taylor (2005) View Richey (2009)		
- Identify…	- Roles…	Complete Form 1A		
- Explain…	- Consequences		Contribute to the forum. Complete Exercise 1B	
- Summarise…	- Overview…			Present team findings.

Figure 6: The horizontal course syllabus grid

The prospect of providing readings to students directly from her own website seemed to delight the professor. I explained to her that this

was still fairly virgin territory and that agreements had first to be put in place. Nonetheless, having digital versions of readings would allow her students to use a full arsenal of flexible word processing tools such as the search tool, also those for the visually-disabled (that can change font size or screen configuration). She agreed that this option was most promising. Due to time constraints, however, we both agreed that it would be something to be gradually integrated into her course, but she would use paper copies this time.

This subject led us into a discussion of copyright law, intellectual property and the readings she intended to use, some of which were written by authors she knew personally. I asked if she had ever contacted these authors (or other professor in her field) to find out what courses they taught, if they taught the same courses she did and whether they'd be interested in sharing materials. She told me that, aside from a few brief conversations on teaching at various conferences, she had never contacted her colleagues systematically about teaching resources. I mentioned how professors are increasingly creating focussed learning communities and blending their efforts to produce didactic material and learning objects which they can then share with one another (such as Merlot, www.merlot.org). I explained that such collaboration could greatly reduce overall preparation time for everyone involved and, through peer review, could also improve the quality of resources produced.

Indeed, an increasing number of collaborative activities are underway, such as open access publication of books and journals, and they are being carried out entirely online, thereby offering several significant advantages:

1. *It speeds up publication time;*
2. *It removes distribution problems (especially if it is published in Open Access mode (http://www.doaj.org/), such as with a Creative Commons license http://creativecommons.org/);*
3. *It makes document updating much easier. In fact, a book could be a permanent work-in-progress; that is, as it was being read and critiqued (as feedback was provided to authors), it could be constantly updated;*
4. *It would receive a far larger peer review than what is currently possible.*

The professor immediately saw the advantage of establishing contacts with her peers about online publishing and freely sharing resources and she said it was something she intended to do. I told her that she could even create a forum for professors who taught the same course across Canada, North America or anywhere in the world. This discussion invigorated us, elevated our vision and inspired us to move on and complete what was left in the design of her course.

She raised the issue of guest speakers that she would often invite to her course and problems that inevitably cropped up every year due to various turns of events, such as sickness, dangerous winter driving conditions, etc. If a guest were to not show up on the planned class date, she would have to completely change everything. She asked me how technology could help her. Since her course was, at least for the time being, being delivered via videoconferencing, I simply proposed the idea of, from now on, her having guest speakers come to the nearest videoconferencing location. The advantage of doing this was a) it would mean the guest wouldn't have to travel too far, and b) that the talk could be taped and archived for future use. However, this arrangement would most likely add an extra cost to the course, depending on the speaker's location.

> *I considered getting my university to subscribe to a synchronous, desktop teleconferencing platform which would allow speakers to participate in her class, regardless of where they were, without even having to leave their office or home. Furthermore, she would not have to restrict her choice of speakers based on travel costs. By having access to a Web-based, synchronous platform, she could invite people from anywhere in the world to speak to her class, show slides and field questions from students. If time zones were an issue, she could decide to interview the person using the synchronous platform, record it, and then either play it during a given plenary session or stream it from her web site where students could view it before the next plenary session. This would require further research and arm-twisting too because use of the V/C system was being subsidized and it had originally cost an arm and a leg. So it had to be used.*

Another problem that the professor brought up was her students' lack of access to scientific journals. She was aware that, in her field of study, some journals were available online but that she had never had the time

to look into the matter further. She was also leery of the quality of such journals. We immediately started an Internet search to find out how many peer-reviewed, virtual journals there were, especially those which were free. At the same time, I also asked the reference librarian to make up a list of journals in this professor's field of study to see to which ones were in our library. Together, we managed to identify three relevant (in which authors she recognized were published) scientific journals, including one recently-launched journal and another that required a password which could be obtained upon payment of a modest, annual membership fee. The professor told me that, with everything we had found, her students should be capable of carrying out some top-notch work. (Her interest and enthusiasm were starting to peak!)

Our working sessions ended with this one. Not everything was done and there were still quite a few loose ends to be tied up but I was confident that she would see things through. I just hoped that she would find time to finish off those parts of the work that we had not had time to complete.

Ex Post Facto Interview

On the design process and using the horizontal course syllabus (HCS): "It was the first time I had ever used this kind of syllabus model. Usually, I provide information about my course "vertically" as you say. I describe how the course is put together, assessment, etc. The first thing I did this time was tidy things up, particularly in the weekly readings. That allowed me to see what was not working…like weeks where there was too many or too few readings. That then helped me see the link between each of my objectives and each of my readings. As a result, I dropped some of the readings which were interesting but not really essential so that I could focus more on what was essential. It was important that I base things directly on the objectives for that week. So those readings I kept as well the most important activities, like the ones which helped students meet the weekly objectives. Overall, I'd say that I managed to remove about 25% of non-essential readings and activities."

On student participation: "The only way to make sure that students do the assigned reading is to give points. I don't know whether they actually did them before, but with the horizontal course syllabus, I decided to organise things differently and only keep the readings which were

directly linked to my objectives, just to make sure that students would do the reading. I then used the idea of creating question-based assignments from your model so that they could get the most possible out of the readings. With the HCS, the readings I kept were all compulsory. As I said, I also added points for each assignment. Overall, this is what I did:

- tidied up the course readings and activities;
- added a reading assignment (like a grid) which helped students work with the readings more effectively;
- made all of the readings compulsory

The results of this started to show during in-class discussions and debates. The discussions were more enriching as we would relate ideas to the texts and go into them a lot deeper. Some students told me that other professors would ask them to do required readings but then they would never bring them up in class afterwards, at least not in any consistent manner. When using the HCS, congruency is a must. If a professor provides students with texts, if the texts are indeed important, then it is just as important to go through them and analyze them together. The HCS made it (my course) so much more systematic."

On the design process: "What impact has it had on my teaching? Well, for starters, I find the HCS useful, whether I teach at a distance or not. It works irrespective of how I teach. Some students recommended the HCS to my colleagues. It is so clear. That helps a lot. For instance, right now, I am giving a course at another university, team teaching with a colleague… but we didn't use the HCS to organize the course. I had been unable to participate in the development of the course syllabus and now I'm having a hard time figuring out the reasoning in how the course is put together. With the HCS, you can see how, from week to week, things are linked…you just fill in the blanks. With the other (course) plan, I have only a vague idea of what we are doing each week. It's hard to go back to the old way of doing things."

On individual or team activities: "That's how I learned to do things. Is it because I have been teaching for a long time that I know it is important? I do know that team activities enable learning. Even when I was doing my Master's and PhD, I had team projects to do. With my undergrad

students, there are problems within teams with regard to sharing the work, but not with my Master's students. I tell them that, when they graduate, "you are going to work in teams so it is important to learn how to do so now." At the undergraduate level, students often see teamwork as something unnecessary and too time-consuming, especially because a lot of them already have jobs. They simply want to get their degree and get a full-time job. I have to remind them that team work is part of their learning."

On technology and faculty: "I really didn't have time to put my course online (in the LMS). You have to do it ahead of time. Besides, my students weren't ready to use it anyway. In the end, I dropped the idea and we simply posted everything on an ordinary web page with links to downloadable documents. The LMS site was just being implemented along the way. It was something that should have been planned right from the get-go. The course was being offered via videoconferencing and the students were wondering "why do we need that (a website) right now?" But I did see the potential and I agree that it is useful. They (students) are used to Web sites but, with the platform, they had problems with passwords, access, etc."

On email: "In the beginning, I found it annoying. But, as a result (of receiving so much), I became more disciplined (in answering email) and told them that I would respond to e-mail at set times, like once every 24 hours, or during my virtual office hour every week. If I saw that I kept getting the same questions, I would bring them up with my students during the videoconference session. If my course was offered on the Web, I would do things differently, maybe with a forum or something."

On videoconferencing technology: "I kept having technical problems. They added some new sites, even one that was audio only. And the room was set up in such a way that I had to lean my head forward, towards the screen and (as a result) I often had a sore back after class. The image was blurry too. I think I would be better off not having any at all. Even the sound wasn't always good. For me, seeing someone's face is not all that important. Good sound and on-screen sharing, however, are. What I want is clarity. I use NetMeeting quite often (for screen-sharing). I told

my students about it and some of my colleagues too. For student support, it is definitely a good thing."

On the effect the HCS has had on her course planning: "This is the most important thing I got out of the whole process. I realized that planning a course one week at a time was reassuring. It makes your job easier in the end. And the students are reassured. They know what is expected of them and they know what they have to do to meet those expectations. When are we going to do this? When do I have to hand in that? They know ahead of time what they have to do. The mood in the group is very positive. Fewer of my students wonder what they have to do and for when (and fewer of them ask me). It's like a contract, it's so clear. We agree on things together. We read it together and if there are things that need to be changed, we change them. Whatever we agree on stays that way for the term. I read it with my students and I return to it often during class, each week in fact. When you give a course for the first time, it's different. When you have given it several times, you are capable of seeing what works and what doesn't. So if either party sees something that doesn't work along the way, it can be fixed.

And the more detailed a syllabus is, the easier it is to come to an agreement with students. You put more time into it in the beginning but a lot less afterwards whereas right now, the course I am giving with a colleague has to be planned out each week.

At the end of the term, we see how things went and make the necessary adjustments. With the traditional course syllabus, where very few activities are actually identified each week, I tend to forget what we've done. As a result, I don't get to reinvest any observations I may have during the course in my course planning. Unless you take note of everything as you go along, which I never manage to do, you are better off doing more planning at the beginning."

On the future and implications for the design of higher education: "Planning is necessary if we want to encourage students to learn. There is a direct and palpable effect. Spontaneity is okay, but with current expectations among colleagues and students and with the little time

available (for planning), people want to have an idea upfront as to what is going to happen in class. It is fine to go off on an 'adventure' (when teaching), but planning the adventure and being able to see the signposts along the way is even better. Systematic planning requires a method. A method is composed of several steps. Each step requires time and means. With conditions the way they are now, there isn't enough time to plan one's teaching properly."