

Chapter 6

Design in detail: pulling rabbits out of your hat

The previous chapter showed the great decisions that have to be made when designing. Maybe, at certain points during your reading, you have experienced that you were pulling “rabbits” out of your hat. At the same time, some others seemed to be disappearing without further explanation. A game appeared here, an assessment of knowledge disappeared there...

If you are an experienced teacher, you probably have many other rabbits under your hat which you can take out whenever it suits you. It is impossible to name them all. I am only going to describe those which seem interesting and relevant to this book. They are details of the design and they can be decisive at times.

From groups to learning communities

What is a group according to you?

Can forty students in a classroom be considered a group?

And what about four people waiting to see a doctor in a waiting room?

As I have been saying from the beginning, distance learning does not mean isolated learning, as it was once regarded (and though many continue to think of it in that sense). DL has increasingly become “no distance” learning (Giusta, 2003), which allows us to interact just like or even more than learning in a classroom setting. An interaction that is vital to every learning process.

In this sense, working with small groups is usually essential since it allows for more intense interaction among members. But there are many kinds of groups and many functions small groups can develop in education.

A group may carry out an activity just once and then disappear as such, then other groups may be formed to perform other type of activity: discuss over a certain concept, define a problem, come up with a proposal, take part in a game, etc.

More permanent groups may also be formed. For example, to make a diagnosis or conduct some research, to devise a project and carry it out, to write a collective paper, etc. The single fact that these activities exist (research, projects, etc.) usually means that the educational space builds a closer relationship with the real world; thus, theory and practice do not appear as separate compartments of stagnant knowledge.¹

However, working in groups is not easy, particularly when we refer to permanent groups. An operating group (Pichon Rivière, 1985) or working team, which is the case here, is a group of people that may agree or disagree, that may have different interests and abilities which cannot always be put into action collectively. Groups are basic cells of educational work, but these cells may easily die. Therefore, today more than ever, educators should learn a lot about groups and their modes of operation.

At the same time, it is important that the general objective of the group work is not lost: learning, collective creation of knowledge, development of a project, etc. Often, groups concentrate on their operation problems and they lose sight of their objectives...thus, they end up working even worse because it is frustrating to make no progress regarding their reason for being.

But, how can groups be formed at a distance?

Some options:

- Forming groups of people who physically live near each other, whether in the same city or region. It is easy for them to get together in this case. And sometimes it is not even necessary to get together. This is the case of groups that have a history together and the course was designed on the basis of these already existing groups. For example: the employees of a company.
- Forming groups at face-to face meetings which then continue their work at distance. It may be the case that members look for ways to gather

| 1 Cfr. Núñez, 1985; Pozo, 1999; Barato, 2004; Catalano, 2004.

together physically sometimes, by sharing time together and contributing to their own consolidation as a group.

- Forming groups only at a distance. Sometimes it is the only option, but it is probably the most difficult one. It is possible that interesting interaction takes place within the large “group”, for example, during a forum; however, it is not so easy to create a strong commitment to team work of a small group in this kind of manner. The e-mail and chat seem to be good resources to keep the group together, though not so much to form it.

There are two functions that tend to be necessary inside a learning group: **coordination** and **register**. The first one may include aspects such as preparing an activity in advance, assuring attendance and general participation, taking notes and giving the opportunity to intervene, etc. The second one implies summarising group discussions and conclusions, which is particularly relevant to DL when it comes to sharing results with the teachers’ staff and the rest of the course.²

These functions may be accomplished in different manners: rotating or fixed, explicit or spontaneous, individual or collective. But they will be necessary and they may require the support of teachers, materials and specific remarks regarding particular tasks to be developed. It is not always enough to say: “get together in a group, work and share what you have done with the others”.

Depending on the group’s nature (“natural” group or group formed for the course’s purposes, ages and experiences) and the kind of task assigned (concrete or permanent, more or less complex, requiring more or less commitment), it may be very useful to prepare **tutorial support in advance for each group**. An interesting resource to make it possible is to resort to good former students. Not only can it reduce costs –it can even be voluntary work– but also their recent learning experience can provide them with better resources to help others, by having an intuition about the “zones of proximal development” of beginners (Vygotski, 1978).

A problem small groups have is that they may be too concentrated on their task in such a way that they overlook **what other groups are producing**. To make the most out of their contributions, creative ways of introducing groups may be of aid (beginning by a name that is easy for others to remember) and having the teacher staff summarising the main contributions made by each of them.

| 2 For a deeper development of this kind of tasks, see Kaplún, 2004b.

When time and distance prevent small groups from being formed, it is still possible to promote profitable exchanges and discussions inside the larger group, whether at forums or mailing lists. In order to achieve this, it is necessary to propose **genuinely interesting discussions**. “Didactic” questions or, worse, rhetorical ones (where the answer is contained within the question) hardly ever arouse any genuine interest to participate. Interest can be generated, conversely, by difficult or controversial cases, i.e. presenting two or more opposite and well-founded positions regarding a certain issue, having different diagnoses for a single situation or several solutions to one problem. Some tutors introduce some mistakes on purpose, as a means of starting up a debate...

Participants themselves may also suggest the cases, questions or doubts that concern them the most because they have come across them at work and have been unable to solve them. To doubt and to pose oneself questions is crucial for learning. Sharing with others helps to create **learning communities** (cfr. Viser, 2000; Pazos, 2001; Pereles, 2002; Kaplún, 2005).

Particularly when it comes to groups of adults who have a long working experience, it is easy to regard the educational space as a learning community, where everyone can share knowledge and experiences, problems and doubts that stem from their everyday activities. When there is no such experience, it is also possible to create life-resembling situations that may serve the same purpose; that is, work projects, case discussion, etc.

Games

The word “game” has several possible meanings. It resorts to the ability to imagine. Making up situations, imagining and proposing possible worlds. It also looks for commitment and tension between competition and cooperation. There are puns and board games, body and mind games, individual and team games, the idea is to play and to dare to play.³

All these senses can be very powerful in terms of educational work. To put into practice educators’ ability to play and open up spaces to enable learners to play is particularly important in DL. We will now consider some examples.

| 3 For an extensive approach on the subject see Winnicott (1971).

Puns and imagery games

- Microchip ravioli in the IT course for small enterprises (Chapter 5). The title “three musketeers” in Chapter 4.
- In a multimedia course about how to prepare coffee, the “presenter” of each topic and the main character used to be a coffee grain (INA, 2005).
- A distance course which is described as a shared journey. We follow a path, sometimes everybody gets on board on a boat, other times we go by train, etc. (Grupo Aportes, 1997).

Board games

- ... Although the *board* can be the computer’s “desktop”, like the game of patience about software at the course for microentrepreneurs (Motz, 2001). It also included a board version to be used with a group, with cut-out cards.
- Path games on a board, where one moves forward or backwards as hurdles are overcome, questions are answered, etc. For example, when dealing with health at work, they may include accidents that can be avoided, preventive measures that may be taken, etc.⁴

Games with the body

- Role-plays, where participants, without prior agreement, play a situation that is later on analysed. A taxi driver and a passenger,⁵ a shop assistant and a customer,⁶ etc.
- Drama, agreeing upon the script they will be acting out. This may serve as a means to pose a problem, summarise a discussion, etc. Participants may play a role or they can be part of the material that has already been designed for the course. The intention is to start up a discussion from that point (the taxi driver, the shop assistant) or combine both methods.

4 For example, we could mention the educational game series developed by the Education Research and Development Centre (CIDE) in Chile during the eighties and nineties, which can be taken as a model to think about new possibilities.

5 Just as it is suggested by the Tutorial plan of the already mentioned course run by SENAC (2004a). In this case the intention is to work with difficult situations participants have lived and which are previously told in an anonymous way. Among the delivered audio materials, on the other hand, there are a series of dramatised situations of this kind.

6 As it could be done in a Customer Service course run by INA (2000). In this case the material includes videos with dramatised situations.

The fact that students are the actors –not only the audience– will depend on the availability of face-to-face sessions with the whole group or small groups. To perform implies much more than watching others and it often brings more intense learning. One *dares* to do more, and puts more of oneself *out there*. However, it is necessary to be careful: as one is exposed in front of others, there can be more fear of criticism or of feeling ridiculous. That is why playing requires an appropriate atmosphere; it is necessary to make clear we play to learn and not to criticise others.⁷

Simulation games

- A company can be simulated; an advertising campaign for an imaginary product can also be simulated, etc. The idea is that this allows to live a situation that is similar to real-life practice; problems can be perceived and the concepts involved can be understood. Different groups can come up with different proposals and defend their advantages before other groups.
- Along the same lines, different situations can be simulated in *debate games*: a negotiation (commercial, salary, etc.), a trial with a defendant and a prosecutor (an enterprise, a job modality, etc.).⁸
- There also exist IT simulations about different chemical, physical and mechanical processes. Springs with different resistors are observed, hydraulic pumps with simulated failures are checked (SENAI, 1998), etc. There are several Web pages where one can have free access to this type of software⁹ and vocational training institutions that have developed their own.

Imagination games

- In Colombia, a long distance course with NICTs has a space for “lunadas”.¹⁰ Just as around a campfire, participants “tell stories” and let

7 That is why I think it can be dangerous to use it for assessment purposes. The nervousness of the moment can go against the game... Conversely, we could think of virtual role-plays, such as the ones that have become popular in the last few years. There the fear to exposure can be avoided by using a nickname.

8 These and many other possibilities can be found in different guidebooks on participation techniques in educational work; among them we find the classic by Bustillo and Vargas (1988, with several re-editions in a variety of countries).

9 For example, Modellus, which also allows to create them (<http://phoenix.fct.unl.pt/modellus>).

10 As we could experience in our visit to SENA in Bogotá in February 2005.

their imagination run free. Since it is a course on international trade, they can imagine they are in a fair where different countries present their products. They imagine how to arrive, the organisation, what they will find there... They get so enthusiastic that they want to go to a real fair. From time to time they have a “lunada”, with another topic that will trigger their imagination. At these spaces, more students –or more eager students – tend to participate. More “serious” forums are not so popular. And learning takes place anyway... or even more, since that enthusiasm they have while imagining a possible world in which they could live resembles make-believe play in children.

Finally, the possibilities offered by play are countless whenever we bolster our creativity and try to solve specific educational problems. Some of these games can become the *communicational* core of an entire course.

- The “glasses” they had to wear in order to see things from a gender perspective also helped to articulate other metaphors later on: looking through a pair of binoculars, windows to new views, pictures that “capture” the present reality of an institution... (Cinterfor/ILO, 2004).
- A city with its diverse systems (health, traffic, security, etc.) worked as a metaphor for several IT systems and their ability to operate in an articulated manner. At the beginning of the course, participants were granted citizenship; they even received their identity card.¹¹

Cases and projects

Working with projects and cases are strategies that allow to acquire knowledge from the starting point of practice. There are different ways to do so, some are similar to play and other are more “real”; they have different degrees of complexity in terms of preparation and follow-up of the work. (Cfr. Barnes, 1994; López Caballero, 1997). We are going to consider some alternatives now.

- Groups are formed and they begin to discuss a *real case they are familiar with*: a company, an organisation, etc.; or even a conflict, a crisis they underwent,

¹¹ This activity was developed by a group of students of the Workshop Seminar on Community and Educational Communication for the course on Interoperability of the School of Engineering of the Universidad de la República in the year 2002.

an accident, etc. All groups may study the same case and then compare answers. Or else, each group may choose a different case so that the exchange is richer and everybody can learn more. It can be a brief and straight-to-the-point discussion or it can guide a whole module or course. While studying the case, learners work with concepts they have seen during the course and/or the intention is that they spring from the work itself. No previous preparation on behalf of the teaching staff is required here; there is not much commitment to reality in fact: even though it is a real case, the idea is not to intervene in a real way but rather use it as a motivation to learn.

- Another strategy is to offer *already prepared real or imaginary cases*, with all the necessary information or only part of it. One or more questions are proposed to trigger group discussion: “what do you think may happen in this case?”, “who do you think is right in this situation?” Another possibility is to discuss what information might be missing which would be necessary to have a better understanding of the case or to find a solution to the problems posed. This strategy requires more preparation on behalf of the teacher who is in charge of selecting the case and gathering the information he or she deems necessary to discuss the case properly. The chosen case has the advantage of orienting the discussion towards topics that may be of interest in terms of learning but which could not appear in the cases chosen by participants, where even important information might be missing.
- A **project** usually requires relatively long work time, particularly if the idea is not only to present it but also to carry it out. In this sense it can be the centre of a whole course. It may be individual, or even better, in groups. A limited way to deal with projects is by having the *training institution itself requesting something* that the group must cater for. For example, building a device that may solve a practical problem, some pedagogical need, etc.¹² This has the advantage that the suggested problem may be specifically oriented towards the intended learning and that the mistakes made may be assumed without the risk of affecting other people inside the institution.
- Projects can be proposed by *students themselves or the institutions where they are working or doing an internship*. There is nothing here that can be prepared

12 This kind of strategy has been developed with some good results in some SENA centres in Colombia, according to what we were told by the people in charge of it in February 2005. For example: during the year, students in a cooling course built a device that was to be used for teaching in their own work area.

in advance, except, if possible, the conditions to allow students to work efficiently in that place. The ideal thing would be to have a previous demand on behalf of the institution, since this will show their interest in the intern's intervention. If it is his or her place of work there is no problem with the presence of outsiders. However, it is not always easy to break with long-standing routines in order to do something different and allow the student-worker to take up a different role. The prior pedagogical agreement should encourage a learning atmosphere, where mistakes are admitted as part of the process and where important margins of freedom are given to welcome new solutions.

- An interesting alternative would be to combine vocational training with *project or enterprise incubator* systems. For example: the course finishes with the presentation of the project, which, after complying with certain requirements, may be apt to enter incubation to be then carried out with appropriate materials and technical support.¹³

The typical stages of a project should be: defining problems or needs, diagnosing, setting objectives, planning, executing, assessing. It is particularly necessary to insist on two important aspects for learning throughout this process.

- Defining a problem or need properly and making a good diagnose is essential. Subsequent errors often have their origin here. It is important to encourage students to think carefully about this point and not to advance quickly after the first definition that comes up or that is proposed. This may imply discussing the definition of the problem with the requesting organisation – a discussion that may not always be an easy one.
- There is almost never only one solution for a problem or need. It is important to stimulate students to imagine and assess several alternatives, to look for new solutions to old problems and to propose new problems that have never been thought of. That is: stimulating the ability to innovate.

13 A strategy followed by SENA (2005) at its Cátedra virtual de pensamiento empresarial (Virtual course of business thinking).

Assessment

We could say: “Tell me what and how you assess and I will tell you what your pedagogical approach is”. Indeed, the way of assessing affects all other pedagogical options. For example: many things can be said about participation, collective learning and collective construction of knowledge; but, if assessment is limited to an individual examination that measures learned-by-heart contents, then the whole educational activity becomes inconsistent. One of the first things people find out when enrolling for a course is the assessment criteria. And this strongly affects their attitude during the course. If they know that they will be positively assessed for repeating everything teachers and books say, it is likely that they refrain from expressing opposing points of view.

There certainly are different situations that require different assessment. For example: courses that require formal accreditation, that authorise vocational exercises or other training levels and other courses that do not require that.

In any case, assessment is always surrounded by tension: assessing products or processes? Results or impacts? Traditional pedagogical trends say that it is essential to assess products and results, and little or no attention is given to processes and impacts.

Assessing results and products tends to be easier. What matters is what has been learned and the traditional way to assess that learning is through a test where students prove how much they are able to produce. However, they are not so much concerned about the process followed: how they learned, the starting points and difficulties to overcome, the ability to think of alternatives to develop along the way, etc. And the impact is neither assessed: if after the test they are still able to use new competencies, if after a while they can still put into practice what they learned, if their working style changes in some way or if they go back to their old working style.

Without overlooking results and products –which eventually are the expression of a process– we will now consider some alternative strategies to traditional tests that may allow to assess processes and impacts at least up to a certain degree.

Process assessment:

- *Projects.* Project design should be assessed from the point of view of products and results but it also offers several possibilities for process assessment.

For example, partial results that may show the progress during each stage: defining the problem, diagnosing, etc. This case will clearly show the differences between what has been done and what was planned; the ability to adapt or not to the plans.

- *Portfolio*. It can be linked to projects or any other working method. The idea is to save all the products that appear during the process and integrate them to the assessment. There can be individual, collective or combined portfolios. It is possible to have electronic folders where documents can be kept as a record of the work done.
- *Logbook*. It can also be individual or collective. It basically consists of a register of the activities developed; it is particularly useful when working with projects.
- *Parallel text*. (cfr. Prieto, 1999). The idea is that the students write down the questions and reflections that come up throughout the course, with regards to what they do, hear or read. In a way we all tend to do this, but we do not necessarily write it down in a clear and systematic way. It can also be part of the diary or logbook.

The latter focuses on a crucial function of assessment which is not always well appreciated: facilitating summary writing, being aware of what has been learned and the paths followed to reach that learning. That metacognitive function should always be present in some way in assessment processes.

Impact assessment:

“*Something I am planning to do is...*” Specific findings about the future use of what has been learned could be included by the end of a course. For example, students can be asked to complete the following sentence: “*after this course I will...*”

Commitment to change. (cfr. Lockyer, 2001). It is similar to the previous one, but it is more precise and implies a follow-up. Students write down on a sheet of paper what they are planning to do in their work to apply what they have learned during the course. The commitment assumed is then re-sent to them some time later (it varies from three months to a year, depending on the subject) and they are asked whether they have been able to comply with their commitment or not and why. Some systems only apply this type of assessment, leaving aside any kind of knowledge assessment.

Projects. Again, they can be a useful tool. For example, the employees of a company may finish a course by presenting a project and leaving its execution for later on. Verifying whether the project has been carried out or not, to what extent and in which way can be good indicators of impact. However, implementing the project does not necessarily guarantee future impacts, though they can give some clues. The same happens with the opposite situation: if nothing could be done, then it is likely that future impacts will be low. When it comes to collective commitments, then the impact may be stronger: it can be harder for a single person to change already established routines and work practices.

Another important issue is **who assesses**. Usually, only the teacher assesses students. Nevertheless, it seems desirable that students get to assess the teacher too, together with a self-assessment and a general course assessment. There are several ways to do so. For example:

- *Individual questionnaires*, probably anonymous. A simple one I often use includes open sentences to fill in such as the following:
 1. Something I heard or saw during this course which I will never forget was...
 2. Something that made me question myself, that made me think was...
 3. Something I would have liked to see in depth was...
 4. Something I am planning to do from now on is...
 5. Group work was...
 6. What I liked least about the course was...
 7. What I liked the most was...

An extra one could be added in order for students to include something that was not covered by the other questions (“what was left for me to say was...”). According to the circumstances, questions may be taken out or added. For instance, including questions that are specific about teachers, the methodology, materials, etc. Some may be Yes or No questions and some may have levels (scores or categories such as: very much, enough, little, nothing).

- *Self or group assessment.* It is possible to share with the group the criteria teachers will use to assess and ask students to self-assess themselves according to such criteria. It will be interesting to discuss with each of them the possible differences. A discussion can also take place about assessment criteria themselves. This can be very enriching.
- *Assessment during the process.* It is advisable to check how the course develops throughout the process, by giving room for everyone’s participation.

This can help detect problems in advance, before it is too late to correct them. It is true that “packed” DL courses, where all the material is prepared in advance, may leave little room for change. But, as I will say in the next chapter, it is not the only option. And even there, tutors have still some margins between which they can move.

We will now look at three issues that have been the centre of the debate on assessment in general and e-learning in particular.

- *Multiple choice questionnaires* about knowledge, either used for assessment or for student self-assessment. They are very practical since they offer automation possibilities and they can be built in a very sophisticated manner so as to ensure their quality. However, they have also been questioned because of their limitations at the time of offering qualitative data and information about processes or to stimulate critical thinking, since they usually only admit one single answer. The name “objective tests” indicates that any observer will assess students in the same manner –in fact it is not necessary to have a human assessor. However, it forgets that making questions is always subjective. And little margin is left for new questions to arise. Therefore, they should not be the only assessment tool if the aim is to assess knowledge-acquisition processes.
- *Criteria for competency performance.* In competency-based training modules, performance criteria allowed to make a more efficient assessment since accurate evidence was looked for and used as objective indicators of having acquired some specific competency. Indeed, this allows to clear up many discussions that are rather confusing. During the last years, significant progress has been made in competency-based curriculum design, with their corresponding performance criteria and evidence gathering systems (cfr. Catalano, 2004; Vargas, 2004).

However, I still consider that there are several problems that are not easy to solved by this approach. In the first place, complexity: the number of competencies and performance criteria is usually too big and it is not easy to verify them all. Secondly, indicators or evidence imply an agreement on what is understood by knowledge, performance and attitudes, though these concepts are far from being agreed upon (cfr. Barato, 2004). There is probably more agreement about “performance”, however, it is the most difficult criterion to assess at a distance. In the third place, the definition of compe-

tencies themselves. When this is done in a collective and participating manner, it can be a powerful tool for assessment indeed. It should include the revision of the initial definition of competencies. When experts are the only ones involved in the process, I think it is necessary to look for additional criteria that may include students' own perceptions about themselves and their specific context of action; and not only assess them homogeneously and from the perspective of a specific external competency.¹⁴

- In the field of vocational training, many of the aspects that refer to performance can only be assessed through *attendance*. For example: how can a cooking performance be assessed at a distance?¹⁵ Many DL systems plan a final assessment in a classroom setting, at least if they grant some sort of accreditation. The intention here is to avoid possible frauds; but in vocational training we can add the physical impossibility to assess many areas without a visible manual activity and a tangible result (or a flavoursome one, if we talk about cooking...).

Good answers... and better questions

Questions are a very useful teaching resource, they are a learning tool. The quality of our questions –the ones we pose or the ones we elicit from our students– can be good indicators of the quality of our courses.

Maybe, the most important questions are those posed by students. I will come back to them in Chapter 8. From the educational point of view, as a teaching aid, questions posed by the teacher or by the DL material are also helpful.

But a question can serve several purposes. To see it in a clear way I will suggest the following activity; imagine you were doing a distance learning course.

14 A discussion on these subjects may be found, for example, in Mertens, 1996; Zarifian, 2001; Díaz, 2005.

15 This was precisely one of the doubts we discussed with SENA's team in February 2005 regarding a course on "cocina criolla" (créole cuisine) that had been run recently.

Take a look at the following questions that were taken from previous pages:

1. Do you know any e-learning programme with this pedagogical approach? (Chapter 3)
2. In which pedagogical approach would closed materials be more appropriate? And half-closed materials? (Chapter 3)
3. Outsourcing: what and how much? (Chapter 4)
4. What other communicational cores could be imagined in this course? (Chapter 5)
5. Do you agree with the technological decisions made? Which alternative decisions could work better? Why? (Chapter 5)
6. How would you set the course's objectives for microentrepreneurs? (Chapter 5)
7. What is a group according to you? (Chapter 6)
8. How can groups be formed at a distance? (Chapter 6)

And now we could add:

9. What different functions do you think these questions have? What other functions could a question have?

We could stop here. We could wait for your answer and the answer of other readers. We could put such answers in order, group them, comment on them, add new ones, question some of them... I think it would be an enriching exercise. We would learn so much together. There are probably things I have never thought about and things I should start thinking of after listening to you. In fact, I have learned a lot from and with my students in this way. They have made me rethink about much of the stuff I took into class with me...

Since I cannot do that here, because I am not in a course –neither a distance course nor a classroom course–, I suggest the following functions of questions which I have thought of.

**A question from the teacher to the students
or a question included as part of DL material can be useful to:**

- a) Examine students' prior knowledge¹⁶ in order to build from that point on by adding new information or questions that may facilitate the acquisition of new knowledge.
- b) Encourage students to be aware of their prior knowledge and be able to use it as the starting point of new learning, by adding to it or questioning it.
- c) Relate new knowledge to previous knowledge; make summaries and comparisons.
- d) Relate new knowledge to previous experience or practices, confront what has been taught in class with other environments (work, everyday life, etc.).
- e) Put a tool (conceptual, procedural, etc.) into practice, exercise with it.
- f) Foster debate, encourage the consideration of opposing, alternative or supplementary points of view.
- g) Point out a difficult or controversial issue and suggest a way to solve it. (It is almost a rhetorical function, since the question may trigger a primary reflection before reading the rest. It may work well as a heading or subheading).
- h) Assess, evidence acquired knowledge, lived processes, abilities to perform, personal or collective transformations, mastered competencies.

Except for case (g), they are activity-questions and they might take good working time before moving on to something else. But case (g) can also be turned into a full activity if after the question is posed, a discussion is proposed and then a text and a presentation are introduced. In this case, the function could be the same as case (a) or (b). Or both, since these two functions usually go together. ... And we could now include a new question:

10. What functions (a...h) do you think questions 1 to 10 accomplish? (that is, including this one).

¹⁶ In all cases the word "knowledge" can be substituted with other words: skills, performance, attitudes, etc. However, knowledge can be enough if it is taken in a broad and integrating sense, where "knowing" is also the know-how to do (or doing-knowing), some knowledge that stems from practice, the knowledge about "building" a construction worker has but that cannot possibly express in words, but "knows" how to do (cfr. Barato, 2004). If you prefer the word "competencies" to express this, I have no objection.

In e-learning we could create a game in which you could drag the mouse to a function (a...h) together with a question and check whether the answer is “correct”. We could add a little bit of “cheating”: accepting more than one correct answer in several cases and pointing that out in some way. Or not having mentioned some function that corresponds to question...Could this have happened maybe? (This could be our question number 11...).

It will be very interesting if you take some time and think about it. *We know, however, this is not usually the case.* You will tend to go on reading (or you are already fed up with so many questions and you simply will not read or think about the issue anymore). The resource of old self-learning books that is programmed to work with a card to cover the answer did not work very well either. Having a key with the answers at the back of the book did not help either. This happens a lot in e-learning, except that the answer does not appear before the student writes or selects an option. And this is not even certain, unless the software blocks the student’s advance until he or she answers. And even in this way, if it is only a self-assessment and he or she finds out that it is enough to answer anything without thinking so that the software would let him or her move on...

And so? Are these questions worthy?

What do you think? (Question number 12...)

Do you want to know my opinion?

(What shall I do? Shall I give my opinion or shall I wait until a debate arouses at the forum? But there is no forum here...).

My opinion is that they are worthy. But in this particular case, rather than engaging in a complicated game, I think it is worth going back to the very beginning and start by simply asking: how are teachers’ questions to students useful during educational processes?

And it is likely that most answers would say: “to assess”.

Unfortunately, questions in education have been overloaded with this function, sometimes leaving aside other important functions they may have. Even worse, assessing often acquires a prosecuting or punitive sense. “I am assessing you”.

If we arrived at this conclusion together, it would then be interesting to show the examples of questions 1 to 8 and once we have that, move on to question 9. What function do these questions have? We would see that many of them do not have the function of assessing. Nevertheless, they may be used in that sense in particular contexts.

We would also see that the context of use is precisely what determines the function.

And so I could now say that it is essential to recover the other non-assessing functions. And put them into practice whenever designing a course.

I could also analyse the fact that there are questions that are much more interesting and challenging than others. For example, if we look at question 2 now, at least within the context in which it was formulated, it would seem almost rhetorical, with an obvious answer, only to reinforce what is being said. Although it can be helpful to show the relationship between one concept and another one seen before (function c), it does not seem to trigger any active mental process.

Question number 6 appears to be much more interesting because its answer is difficult, and probably not unanimous. Simply because there will probably appear valid questions you had never thought about before.

I also like question 7, about groups. But above all, I would like to have the chance to effectively hear all answers, discuss them, then offer one myself, analyse possible contradictions... Something I would not be able to do here.

The discourse model of question 7 would be of the following type:

"What do you think about this issue? Well, this is what I think..."

It is the opposite of what occurs with question number 5 (do you share the decisions taken? what other decisions could be better?) The scheme here would be:

"This is what I think...what about you?"

In a course it is very useful to include even a third discourse model:

"This is what X thinks, this is what Y thinks (etc.)...What do you think?"¹⁷

This opens up an enriching debate, particularly if positions are not rejected in advance. Question number 5 can lead to this if there are enough varied answers to be discussed.

As I said at the beginning, *good questions are learning tools*. The quality of our questions and their ability to start up learning processes are good indicators of the quality of our course. If our questions only served an assessment function or if they were merely rhetorical, these tools would not be as helpful. Let us make the most out of their multiple functions according to individuals, their context and the objectives we set for each case.

17 Cfr. Kaplún, 1996 and 2001. As I say there, these three question itineraries were inspired by Germán Mariño of Dimensión Educativa (Educational Dimension) in Colombia.