Chapter 2

GENERATING COLLABORATIVE CONTEXTS TO PROMOTE LEARNING AND DEVELOPMENT

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ABSTRACT

We proceed to present in this chapter an active and experiential teaching approach based in the creation of “collaborative contexts”. This collaborative approach has been experienced and developed through different educational scenarios from Bachelor’s to Doctorate’s degree studies since 2002. Going beyond the application of cooperative techniques we propose the convenience of reflecting about the kind of context that is created all through one course between all the involved participants: teacher and students as a whole. According to this we reflect and present evidence concerning the following topics: developmental demands for teachers and students participating in a collaborative experience; key social skills (communication, managing conflicts and leadership processes); interdisciplinary practices with the coordination of several subjects; coherent evaluation practices promoting learning instead of control processes; competence promotion instead of just content elaboration; optional instead of compulsory contexts; useful connecting processes (the McGuffin project); real practices instead of faked or simulated exercises and finally integration of new virtual technologies such as wikis, blogs and forums to support the process. After exploring these topics we conclude proposing a typical sequence useful to promote this kind of collaborative approach.

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1. INTRODUCTION

We have been deeply committed in the exploration of cooperative and collaborative methodologies during the last six years. Along this time-span, we had the opportunity of performing and developing four innovative research projects in the general frame of Psycho-Pedagogical Studies in Alcalá University (Spain). These innovative projects were performed and even tested in different educational levels: Bachelor studies (Fourth and Firth Course of Psycho-pedagogy) and Doctorate studies. The performing of the different methodologies was also supervised by several teachers belonging to this Faculty which finally created a research group named as FIT\(^1\).

In short this is a story about how we made a transition from cooperative techniques towards a more open collaborative and experiential based methodology. Through this transitional experience we had the opportunity of progressively introduce and share interdisciplinary projects. We also could discuss and reflect about our own dilemmas about how to manage and evaluate the group dynamics we intended to facilitate. This was a key element for us since as teachers we were an included part of this process instead of an objective and detached element.

Furthermore this is the story of how we introduced step by step technological tools in order to manage the collaborative processes we were developing. So as part of this general methodological transition we can include a technological element, which supported the class dynamics extending them in different virtual settings. According to this we introduced progressively the use of different tools including virtual platforms (Web-Ct, Blackboard, Zoho Project) forums, web-blogs and wikis.

Although the technological tools have been an important part of the general collaborative dynamic, we want formally emphasize how meaningful it was for us to develop a special sensibility to the different contexts we were creating. In relation to this we were very cautious about three different motivational ingredients: (1) the kind of social relationships and other affective elements which appeared during the classes, (2) the learning outcomes in terms of conceptual and competence achievements and finally (3) the possible impact or meaningfulness of the experience and its relationship with the promotion of the participant’s development. Attending to this kind of emergent and ‘pattern-like’ processes was a very important aspect for all of us.

In the following sections we will develop these ideas in order to discuss our approach to collaborative learning. We will provide theoretical support and empirical examples in order to illustrate our arguments.

2. EVOLUTION OF OUR THEORETICAL BACKGROUND

When we began our project of innovating our teaching through the introduction of new collaborative methodologies, we really didn’t differentiate between cooperation from collaboration. We had a general understanding of “cooperative learning” as a teaching-

\(^1\) Formar (Educating), Innovar (Innovating), Transformar (Transforming). http://www2.uah.es/fit/inicio.htm
Learning strategy where students had to collaborate between themselves in order to complete a shared learning outcome previously established (Marchesi y Martin, 1998; Johnson & Johnson, 1999). Cooperative learning was just differentiated from competitive and individualist methodologies. In the competitive setting only a group achieves the objective or the specific external recognition. In the individualist one it is not required to interact with other students in order to get the learning tasks done.

The inclusion of more distinctions such as grade of mutuality and equality helped us to discriminate both approaches from other possibilities such as peer tutorials (Damon y Phelps, 1989; Marchesi y Martin, 1998; Duran, Torró y Vila, 2003). Equality describes the range of symmetry of the roles performed by the participants during the process. Mutuality is related with the sense of connection or bonding maintained between those participants. Participants in peer tutorials have asymmetrical roles or knowledge or skills while the mutuality values can fluctuate. Cooperative learning would imply in contrast a high level of symmetry and a medium value in mutuality, depending on those responsibilities, roles and tasks distributed among the members of a team. Finally Collaborative learning would present the highest levels of both variables. According to McCarthey and McMahon (1992) peer tutorials stress a knowledge conception based on a transmission metaphor which goes in just one direction. In Cooperative and Collaborative learning knowledge is constructed in a multidirectional sense. All relationships flow dynamically while everybody shares the same kind of information. An operative definition we began to handle at this moment was the following: cooperative learning involves the mutual implication of the members belonging to a group which coordinates the tasks of its members with the purpose of constructing some knowledge. In this constructing process every individual learns more compared with what he would learn alone as a consequence of the collaborative learning. Every member is directly responsible of his own learning but also indirectly responsible of the learning of the others members of the group (Iborra, Izquierdo, Cruz, 2005).

During this period we had the opportunity of exploring the introduction of cooperative techniques such as Jigsaw (Aronson, 1978) in several subjects belonging to different studies (Psycho-pedagogy, Knowledge Management Studies, Economy). The experience was very useful in order to understand how differently the same technique could be performed by a group of teachers. In general all teachers who participated in this first project organized their subject lectures taking into account the Jigsaw structure. The process began with the formation of groups in the class. Once these first groups were formed they distributed their members between new groups which were going to specialized themselves focusing on a part of the subject. Once this was completed these members of the specialized groups came back again to their previous groups in order to share their learning. After this it was the moment to include a case, problem or project in order to apply and verify the constructed knowledge, all groups working with the same issue.

Although this was the methodology used by all the teachers, there were differences in the way every teacher performed and interpreted the sequence of the Jigsaw procedure. These differences in performance showed more subtleties between cooperative and collaborative learning. For example we could verify following Ruiz and Shailor (2004) that using a Jigsaw procedure stressed the teacher point of view (for example his preferences) instead of those naturally developed or preferably chosen by the students. In addition it paid more attention to the products elaborated for the students during the process instead of the process itself. The differences found between the teachers were related to how close they followed the structure
of the Jigsaw procedure. In this sense we could introduce a collaborative bias if the attention was focused on the group interactions and the process of a shared construction of conceptual and attitudinal knowledge instead of just following the Jigsaw procedure and the resulted products. This collaborative ‘inclination’ emphasized the students as active members of the learning community created in the class of one particular subject. Although all teachers employed the same cooperative structure in their classes, they did not share the same collaborative principles, what contributed to make a difference in the quality of the experience.

From this we found more distinctions between cooperative and collaborative approaches. Some scholars (Panitz, 1996) understand collaborative learning as a general approach to teaching instead of a group of possible techniques oriented towards the achievement of learning results. In collaborative learning the authorship and responsibility of the process is shared between the teacher and students. In cooperative learning it is the teacher who directly leads all the process from outside, even though the teacher suggests what to do he does not take a direct part in the process. Collaborative learning maintains an idea of Education as a transformative potential for all the participants (teacher and student as a whole). Cooperative learning stress an idea of Education directed towards the transmission of information in order to promote learning. Wiersema (2001) summarizes these ideas in the following quote:

“Collaboration is more than co-operation. I would say that co-operation is a technique to finish a certain product together: the faster, the better; the less work for each, the better. Collaboration refers to the whole process of learning, to students teaching each other, students teaching the teacher (why not?) and of course the teacher teaching the students too”.

Some revisions analyzing different methods of cooperative and collaborative learning (Davidson, 2002; Johnson, Johnson and Stanne, 2000) support this difference between more cooperative and collaborative methods. For example Johnson et al (2000) analyzed 10 methods ordered in a continuum from the most direct and technical to the most conceptual methods. First methods situated at the beginning of the continuum consisted of detailed techniques, easy to learn and make into practice. On the other hand more conceptual methods situated at the end of the continuum were general indications instead of concrete ‘step by step’ techniques. They were more difficult and complex to learn and practice. However they internalized easier and could be adapted to changing situations. After reviewing 158 studies the mentioned authors concluded that conceptual methods produced better results compared with the more direct ones. This idea agrees with other formulations stated in our context such as Durán et al. (2003, p.37):

“the training of teachers in the use of collaborative learning has to move away from direct and prescriptive approaches so typical of technicians who simply apply

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2 The order from more directivity towards less are the following: Cooperative Integrated Reading and Composition (CIRC) (Stevens, Madden, Slavin & Farnish, 1987); Team Assisted Individualization (TAI) (Slavin, Leavey & Madden, 1982); Cooperative Structures (CS) (Kagan, 1985); Students Teams Achievement Divisions (STAD) (Slavin, 1978); Teams-Games Tournaments (TGT) (DeVries & Edwards, 1974); Jigsaw (Aronson, 1978); Group Investigation (Sharan & Sharan, 1992); Complex Instruction (Cohen, 1994); Academic Controversy (Johnson & Johnson, 1979); Learning Together (Johnson & Johnson, 1999).
techniques ordered in steps. The training of teachers has to be closer to strategic approaches which allow adjust their methods to the conditions, students and general needs.”

From this more general collaborative perspective the conditions which make possible an effective collaboration are well known (Johnson, Johnson and Holubec, 1999): promoting positive interdependence, interactions, individual responsibility, social skills and group self-reflection. The conceptual and philosophical approach which underlies the collaborative methodologies mentioned above implies the necessity of promoting and following the creation and maintenance of these five conditions. According to the authors positive interdependence can be achieved by establishing shared group objectives, complementary roles, defining a group identity and recognizing all member contributions. Without interactions collaboration would be impossible. However some interactions could help the process more than others. Some of these interactions deal with motivating, supporting, assisting and interchanging information and experience with other members of the group. Promoting the individual responsibility tries to prevent the diffusion of responsibility that typically appears in the context of group dynamics. Some of the recommendations mentioned by the authors imply using individual evaluations, randomly choosing a spokesman, correcting personal reports or portfolios and combining all this with group evaluations. If interacting is needed to generate the context to collaborate, social skills are required despite of being formally trained or not, in order to interact efficiently. Some of the most typical social skills mentioned concern with fluent communication, resolving conflicts, negotiation and shared leadership. Finally last condition suggest the importance of promoting the reflection of the group members about their processing in order to achieve the objectives, the distribution of roles and tasks, the managing of time with the purpose of learning how to adapt to changing situations.

Taking into account all these collaborative remarks, in the second phase of our attempt of innovating our teaching processes we left behind the cooperative procedures to explore the direct application of collaborative processes. We continued working in groups every class but in a more natural way. Instead of following any of the techniques mentioned by Davidson, (2002) and Johnson, et al (2000) we worked more with the own group dynamics at same time paying attention to the specific content of each subject. We did not divide the class into fixed and defined groups as we had done previously. Some problems we had had such as that not all people came to all the class sessions (what affected to the work of the specialized groups) and the own heterogeneity of responsibilities held by the students, took us to explore more open ways of organizing the class. For example the themes belonging to the course were introduced sequentially what meant that we all worked the same topics in the same moment, while exploring them working in groups, trying to change these groups whenever it was useful in terms of promoting that everybody worked, shared information and knew all others member of the class.

We realized that even the most conceptual types of collaborative learning such as Group Investigation (Sharan & Sharan, 1992), Complex Instruction (Cohen, 1994), Academic Controversy (Johnson & Johnson, 1979) and Learning Together (Johnson & Johnson, 1999) had a “cooperative” bias in terms of the general context that was created in the class. Despite of its place in the continuum suggested by Johnson et al. (2000) all these modalities of learning finally were very structured, technical, separated the teacher from the students
maintaining a clear hierarchical structure and were oriented towards the completion of learning tasks and objectives, what finally led to the promotion of a sense of learning based in the more elaborated transmission of information.

All this was clearer after reviewing the constructionist and postmodern work of Anderson (1997). According to her collaborative learning goes clearly beyond following predefined steps or the mere establishment of five conditions (positive interdependence, interactions, individual responsibility, social skills, self-reflection of the group dynamic) which could be present but not giving place necessarily to a collaborative context. According to this author there are more elements that need to be introduced in order to set the conditions for the emergence of a collaborative context. Some of them are suggested in the following quote which refers to her teaching to promote complex competences necessary to be a therapist:

"the objective of the teacher is not exporting what he knows (a predetermined content), neither providing a recipe to do therapy (a manual of techniques) or telling the student what to do, or correcting mistakes. His objective is giving to the student the opportunity of participating in a shared research of the topics treated at hand and the shared search of a conclusion (...). This requires that the teacher trusts in the initiative of the other persons, in the process and their relationship" (p.322-323).

In contrast with the previously ideas about collaborative learning, we find in this quote some key differences. First of all it emphasizes the creation of an open process of research and exploration whose results will depend on the interaction of all the participants. The point is this creation of a research context. What is at stake is the process of ‘exploring’ in itself and not so much the final result of this search (although it is important it is not the most important thing). Besides, in order to create the research process, the teacher has to trust in the students. For us this was quite important due to this idea reversed the subtle hierarchy maintained in the previous examples of both cooperative and collaborative learning. When you trust in other participants and most important in the relationship between all the participants the teacher cannot maintain a separated place in the process. He is part of the process although with a different role, but not stressing a difference in authority. This authority remains in all the participants who are responsible of the success or failure of the process. As a final idea the process is clearly differentiated of the contents and privileged over them. In support of this, the teacher maintains a position of “not knowing” instead of one position of expert. As the author states:

"a teacher does not know beforehand what it is important for a student, he does not know his goals (standardized learning). An anticipated knowing could bother the development of an ambient of learning and joining in a team." (p.324).

This general attitude of not knowing (and wanting to know) stimulates the process of shared research. A conception of collaborative learning like this really emphasizes the potential of transformation inherent in learning. One is transformed (teacher included) thanks to be involved in the research process and not so much for learning any concrete content or even skill. As Anderson suggests
“all participants (teacher and student, supervisor and supervised) learn and change because every one constructs something new and different from sharing, exploring, connecting and entwining own voice with others” (p.325).

As part of this transformation students get a higher sense of autonomy and authorship. As a consequence of sharing their learning students begin to recognize and value their own knowing, competence and talent. We will extend this idea in another section of this chapter but we can anticipate that from a development psychology point of view this mentioned transformation is quite related with what some authors refer to as relativity stages (Perry, 1970; Perry, 1981) or self-authored students in at least a fourth order of consciousness (Kegan, 1994). The key point is that collaborative learning can promote the developmental transformation of the students participating in the process in terms of promoting higher autonomy and self-reflective capabilities. For Anderson this transformation takes place thanks to the involvement of all participants in a dialogical practice. The transfer of any learning resulted from this interchange of ideas or conversations cannot be forced by a formal assignation of tasks to do beyond the classes. Although the most important learning will take place out of the formal class this is a consequence of what happened in the class which acted as an invitation to go on reflecting, thinking, considering, wondering and researching ideas. This emphasis in the exploring nature of learning has also been maintained by others authors from constructivist traditions such as von Foerster (2003, p.71) who states following this line of thought:

“Turn the teacher who is supposed to know into a researcher who is eager to know! And if you continue along these lines, the so-called pupils and teachers become collaborators who create knowledge together starting from a question that is fascinating to both of them”.

The acquisition of these ideas meant a turn in our approach which also was supported and enhanced by the introduction of new electronic and virtual technologies, the web-blogs which acted as shared portfolios. However despite the use of any new technology this change towards generating true collaborative learning scenarios moving away from cooperative learning was the key point at this stage. Although there were more additions like preparing interdisciplinary experiences, shared with others teachers and subjects, the main change had already been introduced. This had consequences not just in how we prepared the sessions and programmes of our subjects but also in our form of evaluating them in order to be coherent. Furthermore this added a new sensibility towards noticing what kind of contexts we were creating or failing to create. In the following sections we will develop some of the distinctive features of our collaborative approach.

3. WHAT KIND OF CONTEXT ARE WE GENERATING?

As mentioned in the previous section one of the particularities of our approach highlights the fact of noticing what kind of contexts we are generating. The idea of context is a concept very abstract. It also has been used in the literature with many varied meanings (Magnuson and Stattin, 1998). Our conception of context involves taking into account a situation, the
tools, people who participate in that situation and their relationships and finally the interpretations and meanings constructed between all of them (Baars, 1989; Otani, 1994).

According to McWhirter (2002) and taking into account the previous ideas, we could manage the idea of context attending to three different contextual perceptive positions: objective, subjective and contextual perspective. Thus from an objective point of view there will be common elements recognized and shared by all the participants such as the physical or virtual scenario where the classes are happening. Even the educational nature of the activities which take place in a class or virtual platform as part of a building called faculty, which also belongs to a bigger institution called University, would be more objective and easily shared and recognized by all the participants. Other objective contexts are given by the name of the subject and the teacher and department responsible of it. Although unconscious in nature all this objective elements conform internal scripts and rules which all the participants will follow naturally. So it is expected that in a building called Faculty X there will be classes with teachers specialized in that matter. It is also expected that all participants will go there in order to learn, whatever it means. In the class of the teacher Y it is expected to be sat down listening and taking notes while in class of the teacher Z it is expected to be discussing actively with other students. In both scenarios there exist different objective contexts which shape the behaviour and expectancies of all the participants. As a general educational context one behaves differently in a Faculty than in a Restaurant, a Market, a Discotheque or a Hospital.

However despite of these objective contexts we can take notice of more subjective contexts which will have a great responsibility in the meaning of the actions performed in the class by all participants. As examples of these subjective contexts we can find the specific expectations held by any student in one subject as a consequence of the reasons they have to be there and the purposes they want to achieve. So a student could attend a class because he needs to conclude the career in order to be independent from his family. Another student attends the same class because he wants to make a difference in his training and find a better job. Another student attends that class because his best friends are there as well and just want to have fun. Another student is there with the purpose of filling some conceptual and competence gaps he finds in his formation. Another one maybe is just there following the inertia of just attending one more boring class and so on. Any of these students maintains subjective reasons and purposes which will contextualize their actions, motivation, relationships and attention because of the different meaning of the situation. Of course the teacher will have his reasons and purposes acting as his own subjective context: he’s there teaching just because he is paid for it, or because he’s committed with the idea of inspiring their students, or because it is part of a research or because he is forced to be there in order to go on doing more interesting research practice. All these reasons and purposes will contribute to the emergence of particular subjective contexts for all of them. An interesting subjective context emerges from the special relationship created between the participants. So there could be competitive relationships for getting the highest grades or collaborative relationships in order to help everybody to learn the most. There will be friendly and unfriendly relationships, confident and distrust relationships, boring and amazing relationships, pragmatic and relationships for the rest of the life, etc… and all of them will also influence what does it mean for the participants to be there in that class in spite of its objective characteristics (in Faculty X, virtual or not, etc…).
A different kind of context is that one which is more directly and subtly involved with the creation of meaning, we could call it ‘contextual contexts’ because of this. They are very subtle but will frame all the objective and subjective contexts mentioned so far. Of special interest for us is the creation of a research context, a curiosity context, a developmental context, a learning context, a search context. These contexts are an intrinsic part of collaborative learning but could be taken for granted instead of being promoted explicitly. Different contexts which could also be created (consciously or not) are passive contexts, “just get the answers” contexts, stagnation contexts, security contexts, control contexts, etc…

Evaluation is probably one of the best ways of communicating unconsciously what kind of contextual context is generated in one class. For example an evaluation based in a final exam that has to be passed, frames the activities performed in a class very differently compared with an evaluation which privileges what students think they have learnt and developed during the semester. Evaluation frames and contextualizes all the actions held in the class. Those meanings of one subject will come from these subtle frames: a subject full of tasks which are all punctuated quantitatively shapes a very different context compared with a subject where all tasks are voluntary and receive qualitative feedback but never are punctuated. In the first example the context created is one which values the achievement of tasks and completion of products. In the second example the context created is one which highlights the process of learning and the responsibility of students in that learning. In both cases there are products and processes but the meaning and potential meaning of the activities are not the same, for example the meaning of mistakes. In this sense we consider two contexts as very important: optional towards compulsory contexts.

One of the main differences we found between collaborative and cooperative classes had to view with whether the tasks and actions were free based or in contrast were forced. Because of this we use to enhance the optional nature of most of the activities suggested in our subjects for many reasons. First, if it is optional you have to choose it and if you choose it the responsibility comes from you instead of from the teacher. Second, if it is optional you can choose what you do according to your own interests and motivations. Third, if it is optional you can also notice a sense of trustfulness in your own way of deciding by part of the teachers and the other students. Even though one could decide wrongly and not to do anything at all, finally everyone is confronted with a self-evaluation taking the class achievement as whole standard. The interesting part of all this, according to our experience, is that students do their best compared with the students who belong to subjects which force to attend to classes, or participate in forum discussions, or read X articles, or write X reports per week, etc… The context generated when the activities are freely chosen is definitively different in contrast when there is a sense of doing something just because there were external norms for that. This does not mean that we never order compulsory tasks, readings or activities. What is at stake is what general context has been created which frames every task or activity. As a relationship frames the meaning of a joke about you (you will not interpret it the same if the person who says the joke is a close friend or an unknown), the context created frames and makes possible all activities taking place during a class.

Noticing what kind of contexts emerge during a class or subject and whether they are consistent and coherent with the contexts we are interested to promote is one of the most important elements of our approach. Objective, subjective and contextual contexts are thus very important distinctions to notice.
4. THE McGUFFIN PROJECT

One specific way of playing with the generation of contexts with the purpose of promoting exploration, connection and research processes and its effects on creating challenge and curiosity for knowing, is what we called the McGuffin project.

The McGuffin project was born by chance. It emerged during the subject of “Learning Disabilities” belonging to the Psycho-Pedagogical Studies, and it is still open to new applications. It became a joke for labelling some topics discussed during the classes that shared some particularities:

1. They were neither a central issue of the subject nor were explicitly stated in the program.
2. Although topics were not a central issue, and maybe because of this, they called attention on themselves.
3. As an example of their peripheral nature, they were never completely and exhaustedly covered.
4. Actually they seemed more an excuse to work something else, a mean to get an end, but a mean that seemed intriguing enough to evoke interest and attention.
5. They could appear just once or from time to time as if they wanted to recall their presence. In this sense there were two different types: occasional McGuffins which appeared just once or transversal ones which were developed in parallel with the subject.
6. McGuffins helped to start processes of exploration which led to different places which coincided with explicit goals of the subject.
7. Many students began to think outside the class about the nature of the McGuffins and their connection with other McGuffins or the goals of the subject. It served then to initiate hypothetical reasoning so typical in abductive thought.

In general McGuffin helped to gain attention, to evoke questions in the student minds and to prepare the possibility of connecting classes, concepts and practices. In essence finally it implied going beyond the content of the subject to promote something more important, the processes that we were trying to practice as students of that subject. Generally these processes involved the discussion or participation of small groups or the whole class as a group. As we realized it was one way of promoting the work of competences due to it paid attention to the processes performed by the students instead of contents they had to learn.

Furthermore McGuffins usually were presented erratically during the classes. For example after a short or long explanation or the question of one student, the teacher could add like diminishing its importance:

“well but this is just a McGuffin”.

This short sentence could call the attention of students towards the previous explanation in a different way, reframing it as a special explanation, not an ordinary one:

“Is it what?”
Of course the name of the McGuffin is in itself a strange word for the major part of the students unless they are interested in the cinema and know the movies of Alfred Hitchcock. Interviewed in 1966 by François Truffaut, Alfred Hitchcock illustrated the term "McGuffin" with this story:

"It might be a Scottish name, taken from a story about two men in a train. One man says, 'What's that package up there in the baggage rack?' And the other answers, 'Oh that's a McGuffin.' The first one asks 'What's a McGuffin?' 'Well' the other man says, 'It's an apparatus for trapping lions in the Scottish Highlands.' The first man says, 'But there are no lions in the Scottish Highlands,' and the other one answers 'Well, then that's no McGuffin!' So you see, a McGuffin is nothing at all."

More succinctly, Hitchcock defined the McGuffin as the object around which the plot revolves, it is a plot device that motivates the characters and advances the story, but has little other relevance to the story.

For us the strange name works as an invitation to define it, to explore its meaning, it suggests a mystery to be resolved (Cialdini, 2005). Instead of the content of the McGuffin, the idea of McGuffin could be in itself a McGuffin as well. Some examples of McGuffins worked during our classes are the following:

- The idea of digital immigrant and digital native (Prensky, 2001), could be connected to our students? Or better said, are our students digital natives while we as teachers are digital immigrants? How is this separating us? What could be taken into account of these two 'cultures' in order to communicate people belonging to them?
- What is the difference of dynamic VS static ways of evaluating aptitudes? How can be done something dynamically or statically?
- What is a process? How is a process related with the dynamic evaluation? How can we track processes though time when working with an individual or a group?
- What is an inference? How do we construct meaning of the world? What does it mean to mean something? How is this related to deductive, inductive and abductive reasoning? What is abductive reasoning? What processes are involved?
- What is a context? How many contexts could we differentiate? How is the context connected to motivation, social skills or even learning disabilities? What is the connection between context and meaning?
- What is a pattern? Why it was so famous the sentence of Bateson “the pattern that connects”? What is the relationship between pattern and process? And with meaning?

After reading these few examples of McGuffin you could understand the typical headache of many students but also the awakening of a new class of wondering process. As you can also notice the McGuffin are better expressed with questions which could orient our attention towards a new scenario, a new possibility. Besides it enhances the need of creating connections. McGuffins are not isolated structures, neither isolated processes. They can

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3 Retrieved from "http://en.wikipedia.org/wiki/McGuffin"
connect with different McGuffins and above all with the themes, topics and activities worked and presented during one or more subjects, which are not neither isolated nor independent. With the purpose of objectifying this dynamic we have discussed about McGuffin in blogs, forum and wikis.

5. INTERDISCIPLINARY EXPERIENCES

Another example of connecting concepts, topics, competences, collaborative work, motivations and contexts is the creation of interdisciplinary experiences. First interdisciplinary experiences involved the act of coordinating several subjects in order to work one topic from different points of view but simultaneously. The main purpose of this, once more, is to promote the connection between different subjects, and even the connection of different students, between students and teachers, and even students belonging to different studies.

Three examples will clarify this point.

In 2006 we analyzed a new educational law from the perspective of its pedagogical Curriculum features; the learning strategies it promoted or not and the developmental principles that were underlined. Students had to make only one work valid for three subjects, collaborating with students who belonged to their class and also different classes. One of the specific dynamics was related to the performance of a Trial to the law, with lawyers, one judge, public prosecutors, witnesses, jury and so on.

The second example was quite similar. In 2007 we coordinated four subjects (Curriculum, Learning Strategies, Developmental Psychology and Family Studies) in order to reflect about the suitability of a new subject for the Spanish Public Secondary Education: Citizenship Education. This new subject was presented as an alternative to traditional subjects such as Religion (from a catholic perspective) and its development had been preceded by many debates in mass media. Once again all students belonging to every subject worked collaboratively the same topic trying to generate just one integrated perspective.

The third example coordinated two subjects belonging to different studies: Psycho-pedagogy and Sport Sciences. First subject was directed towards developing Social Skills Programs. Second subject was directed towards the creation of physical activities in natural scenarios. Examples of these activities were to cross a river with a bridge made ad hoc with strings, orientation in a mountain using maps and compasses, taking and interpreting animal footprints, etc… Students of Psycho-pedagogy acted as students for the students of Sport Sciences in the performance of their practice. One month later Sport Science students participated in a social skills program created for them by the students of Psycho-Pedagogy. This promoted the real practice of knowledge and competences worked during the classes. Once again it stressed the connection of class dynamics learnt in a familiar context of

4 The following links illustrate attempts to define what a McGuffin is (http://dapsicouah.wikispaces.com/ and http://www.youtube.com/watch?v=Es&hl=es&v=s21cOtspGSw ).
practice, with the performance of those dynamics, competences and knowledge in a context of unfamiliar context of real application.

The search of interdisciplinary experiences has demonstrated its efficacy in order to situate learning in more real contexts which go beyond formal classes. Besides they highlight the need of collaborating with others in order to create a shared meaning of the experience and also using it. As an example of collaborating learning the knowledge which results goes beyond the one that could emerge from isolated subjects.

6. EXPERIENTIAL LEARNING

A key element of our approach privileges an important characteristic of learning: experience. As a matter of fact what is implicit in the McGuffin Project, the interdisciplinary examples we gave in the previous section and the idea of taking into account the concept of context, is the importance of sharing and living meaningful experiences and being able to learn from them.

In part our conception of experiential learning is related to the idea of creating conditions of situated learning focused on the students and their active participation during the learning process (Miller, 2000; Jonasen, 2000). From this perspective the task of the teacher would imply designing “problem situations” which could facilitate the construction and elaboration of meaning. One characteristic of “problems” in a collaborative context is that all the examples of “problems” such as projects and analysis of cases, are formulated in order to lead learning instead of merely serve as illustration or application of previously taught theory. The key idea is that students will learn any content needed as a consequence of the task of resolving their problem. As Schank states (2000, p.183)

“the most effective way of teaching is creating situations for students where to achieve the learning goals, they need the knowledge and techniques we want to impart”.

The key one more is the idea of needing the theoretical content or technical procedures because it is related to our purpose of dealing with a general meaningful problem. For example as we read in the previous section the students who had to prepare a social skill program for a group of students coming from another faculty, or the students who participated in the experience of judging an Educational Law, all of them needed theoretical contents, procedures and practice competences in order to achieve their complex and challenging task. Even more they had to collaborate with others. In this sense learning implied fundamentally to learn to situate and create meanings for one specific field. To understand meanings involves thinking carefully about the concrete situation and field we are. We agree with Schank (2000, p. 177) when he states that

“unless students know what to do with their knowledge they will forget easily what they learnt”.

On the other hand our approach to experiential learning is specifically oriented towards the exploration of processes (Ingarfield, 2007). In contrast to the classical approach of Kolb (1984) we are not so focused on the content of the experience but in the processes which lead
to that experience. According to Ingarfield (2007) and following the systemic approach of the psychologist John McWhirter DBM®, (Developmental Behavioural Modelling) this is the general outline of many of our experiential sessions:

1. The teacher or trainer introduces one topic, an open set up to have a general idea about that topic. For example: what does it mean to communicate?
2. Participants explore without an aprioristic idea. For example different ways of communication, how does it differ in different situations, possible elements, how do they communicate while exploring it, etc… Or
3. Participants check what they are getting from their exploration.
4. Participants share in groups and with the whole group their variety of experiences.
5. From the feedback of the participants the teacher / trainer can then introduce a formal model. For example Watzlawick, Bavelas and Jackson (1967) axioms on communication.
6. Participants check that formal model with their previous and ongoing experience.
7. Both participants and teachers or trainers identify the results, limits and possibilities of the model.
8. Repetition of the process.

This experiential learning which takes place enhancing the exploration of different topics is designed with some purposes in mind such as promoting the active participation of students, developing competences, creating gaps in the understanding of the topic, stimulating curiosity, promoting reflection and critical learning, etc…

This approach of experiential learning has also been very useful for exploring and training one meaningful element of collaborative learning, this is social skills.

7. **THE IMPORTANCE OF SOCIAL SKILLS**

As we mentioned in previous sections, social skills have been considered a fundamental element of collaborative learning. We take into account social skills directly only in one of the subjects we lecture which deals with developing social skills programs. However we attend indirectly to social skills in all our subjects. In general people have to work in groups all along the classes. These groups can be formed by known and familiar people but we also stimulate the creation of groups formed by unknown or less familiar members. In both contextual groups (familiar-unfamiliar) three social skills are very important: communication flowing between the members of the group; the emergence of conflicts and finally processes of leadership.

Communication, conflicts and leadership are the three social skills more direct or indirectly trained in the work groups. However the same skills appear in the process with the whole group including the teacher who has to communicate, deal or even create conflicts and follow / lead his students.

Very early in our classes, students understand their active role because they have to communicate between each other and with the teacher in order to learn and share their
learning. This is made possible in the class through different conversations held with the classmates in different groups or the whole group (the teacher included).

The communication concept we are basing ourselves on was stated in Watzlawick, et al. (1967) theory on communication, which derived from the work of Gregory Bateson (1972). The five axioms of communication are the following:

Table 1. Axioms of Communication (Watzlawick et al. 1967)

<table>
<thead>
<tr>
<th>Axiom</th>
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<tbody>
<tr>
<td>1. One Cannot Not Communicate</td>
</tr>
<tr>
<td>2. Every communication has a content and relationship aspect such</td>
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<tr>
<td>that the latter classifies</td>
</tr>
<tr>
<td>the former and is therefore a metacommunication.</td>
</tr>
<tr>
<td>3. The nature of a relationship is dependent on the punctuation of</td>
</tr>
<tr>
<td>the partners communication procedures.</td>
</tr>
<tr>
<td>4. Human communication involves both digital and analog modalities.</td>
</tr>
<tr>
<td>5. Inter-human communication procedures are either symmetric or</td>
</tr>
<tr>
<td>complementary.</td>
</tr>
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</table>

As traditionally has been stated (Watzlawick et. al 1967) ‘One Cannot Not Communicate’. This means that in any social interaction there will appear communication processes, even the supposedly absence of communication, for example generating silence or just listening what the teacher dictates, are examples of communication.

Traditionally social skills programs stress the element of transmission involved in any communication process: how to transmit in the clearest way our ideas, arguments, feelings and so on. This metaphor of transmission focuses above all on the content of the communication. In this sense information should be clear, structured, organized, convincing, not confusing, not ambiguous, etc… However we take in account very seriously some constructivist premises such as all information and communicative act have to be interpreted by the participants. One very important aspect of communication involves thus distinguishing between information and meaning. Even though all members in a group can share the same information this does not mean that they will have the same understanding of that information. There will be an influence of the previous knowledge of all members and how do they connect the new information with the old one; it will be important who gave the information and his status in the group (depending of this it can be listened carefully or just quickly forgotten); it will be important the interest and motivation of the members to attend to the information, etc… Of special interest for us is the quality of the relationships which emerge as part of the communication. As we know from Watzlawick et al (1967) and its second axiom on communication

“Every communication has a content and relationship aspect such that the latter classifies the former and is therefore a metacommunication”.

In this sense any communication has two main components: content and relationship, working the latter as a context for the former. The same sentence will communicate different meanings depending on the relationship perceived by whom is that said, for example in terms of power, trust, admiration, friendship, fear, boredom, rivalry, etc… All these examples create different relationships, being one of the most important who is up or down in the relationship. Or how is the pattern of the relationship, symmetrical or complementary. To be sensible to these relationship differences is one of the most important aspects for us in order to generate
communication processes which make easier to collaborate. For example the content elaboration will be very important but creating a relationship between the members that promote trust, respect, flexibility instead of rigidity, familiarity, interest, etc… is even more important for us.

Managing conflicts is the second of the social skills we pay more attention to. Going beyond a negative connotation of the term conflict, for us it is a key element for learning. Conflict is generally understood as something that has to be coped with and solved. From a developmental point of view, however, we expect that conflict helps us “to solve ourselves” instead. This means that conflict is considered a chance for personal development.

The conflict can be internal (new knowledge that confronts previous one) or interpersonal (for example getting along with someone who tries to impose his ideas or way of doing things all the time). There are many authors who have elaborated different kinds of conflicts in terms of his structure or form (identity conflicts; knowledge conflicts, power conflicts, etc…) but in our approach once again we prefer to privilege a process orientation. According to Selman (1980) “perspective taking” is the ability to assume the perspective of another person in order to understand their thoughts and feelings. This ability evolves from the age of three till 15 through four different stages. Children of 10 and 11 are situated between stages 2 and 3. Stage 2 is called “Reflexive Perspective Taking”. It implies for example that a child understands that any individual knows the perspective of others and this influences the point of view that one has about the others. To take another’s perspective is one way of evaluating other’s intentions, purposes and behaviour. A child can create a sequence of perspectives but at this stage he cannot coordinate and integrate all sequences as a whole. It is at stage 3 “Reciprocal Perspective Taking” when teenagers understand that individuals can perceive themselves as a whole. This implies going beyond oneself and the other in order to perceive the relationship from the point of view of a third person. The fourth and last stage means going beyond the relationship to include social conventions or rules and the general context where the interaction is taking place. Teenagers at this stage understand that a reciprocal perspective taking does not provide a complete understanding of a situation if there is a lack of this social context where social interaction gets its full meaning. In order to understand oneself one must first understand the others. Then the individual must determine how he or she is both similar and different from others. As Markstrom (1992, p. 183) states

“social perspective taking establishes such a process by allowing the individual to reflect upon the self from the perspectives of other individuals, other groups and society as a whole.”

An overemphasis on the perspective of others is said to lead to rigidity, while too much emphasis on the self’s perspective may lead to egocentrism. Thus dealing effectively with challenging relationships and interactions requires the ability to perceive and integrate a number of different perspectives.

Natural conflicts that emerge during our classes help to integrate many of the topics mentioned so far: the communication processes maintained by all participants in the collaborative experience, the quality of their relationship and also the different contexts that give meaning to the learning situation.

Finally the last social skill we include formally is leadership. It could be widely accepted that leadership is one of the most researched and trained social skills. Many different theories
of leadership have evolved the last thirty years focusing on different variables of leadership such as personal traits, situational interaction, function, behaviour, power, vision and values, charisma, and intelligence among others. A common trend on current literature on leadership concerns with the idea of balancing the figure of the leader with the follower. According to this, and in relation to the third axiom of communication mentioned above, a leader would not exist without followers, and followers would not be needed unless there is someone leading them (Reicher, Haslam and Hopkins, 2005; van Knippenberga, van Knippenbergb, De Cremer and Hoggd, 2004). Thus in order to complete the theories of leadership it could be appropriated to include a theory of ‘followership’.

According to this, our approach pays more attention to the processes involved in the act of leading and following as whole. It has been very useful for us to differentiate between active and passive ways of leading and following. Furthermore we take into account whether the leaders and followers attend to themselves (this is their reasons, needs, purposes and motives), other’s (reasons, needs, purposes, motives) and the context(s) in order to perform their leadership and followership.

For example when we as teachers and assumed leaders in a collaborative class ask students for their expectations, reasons and purposes, we are enhancing processes of actively following as a form of leading the group. In the same way students who express their concerns, worries, expectations, reasons and purposes for participating in the subject are leading the process actively. Those students who just keep silent are passively following their classmates and their teacher. That teacher who waits until their students present the results of their inquiry process is leading them passively and making then possible their active instead of passive “followership”.

Beyond the variables traditionally studied in connection to leadership (power, charisma, vision, personal and situational traits, etc…) these distinctions have helped us to track the collaborative processes that take place between all the participants in a class from an subjective experiential point of view. These distinctions make easier to understand how is something happening and as a consequence it is even easier to notice why some experiences designed to create a collaborative context fail while others succeed. In connection to the idea of contexts we mentioned above, when a teacher forces their students to do a task or even to attend his classes, he is actively leading them to do that task and even to attend his classes but he is also probably promoting a “passive followership” due to it is externally maintained. This ‘obligation context’ will prevent in our opinion the fulfilment of real collaboration practices.

Communication, managing conflicts and leadership-followership are three key social skills that should not be taken for granted in the process of generating collaborative learning. As we will see in brief this will demand in return more developmental challenges for the teachers who are willing to collaborate with their students with the purpose of learning together. We want to highlight once again that these social skills could be worked direct or indirectly. In relation to this topic we support the idea of developing social skills as a consequence of participating in a collaborative experience through the elaboration of meaningful and real tasks. It is quite common in literature about cooperative learning the idea of training social skills beforehand the beginning of the authentic cooperation practice (Slavin, 1983, Leon, 2006). In contrast to this we support the idea of developing these skills

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5 The nature of a relationship is dependent on the punctuation of the partners communication procedures.
in parallel to the progress of the collaborative experience. Social skills would be then contextualized in a concrete and meaningful task what would ease its transfer to new learning and personal contexts. As a consequence of this we also defend the idea of working with the ongoing and real experience of the participants in the course instead of with simulated or faked dynamics so typical in the role playing and simulations that integrate so many social skills programs following cognitive-behavioural methodologies (Iborra, 2004). So we don’t simulate conflicts in our classes to work the need of taking different perspectives in order to understand their complexity. Otherwise we make use of the real conflicts that emerge naturally or that we even create consciously as an opportunity to understand this phenomenon and ourselves in a deeper way. For example it is quite common that students have conflicts and discussions in the process of developing a social skills programs for other students, or in the process of analyzing a case and planning an intervention. The teacher just needs to notice these situations and use them during the situation providing time and distinctions to reflect about them. Acting like this situates social skills in real practices.

8. THE DEVELOPMENTAL DEMANDS AND CONSEQUENCES OF COLLABORATION

All along the chapter we have alluded several times to the connection between collaborative learning and development. In section two we contrasted cooperative with collaborative learning. One of the differences we mentioned explicitly concerned with the idea of transformation. In cooperative learning underlies a principle of transmitting knowledge working in groups which follow a structured script that a teacher created intentionally. By the other hand in collaborative learning underlies a principle of transforming all the participants in the learning process. Interestingly there are no many concrete references in collaborative literature to what is going to be transformed. According to our approach we defend the idea that collaborative learning will promote the development of all their participants, students and teachers included. The transformation, if it takes place, has to deal with epistemic changes which emerge as a consequence of achieving higher levels of autonomy, responsibility, capacity of managing relationships and adopting multiple perspectives or points of view, of constructing a sense of identity, of identifying contexts and adapting to them without loosing oneself in the process, of thinking in a more relativistic way which understands that there are many answers and possibilities to the problems inherent in the process of learning and living, etc…

Collaborative learning is not free, neither for the students nor for the teachers. It demands specific developmental challenges for all the participants. According to some authors we could add that it implies for students to achieve a fourth order of consciousness (Kegan, 1994) and for teachers to operate at least from a fourth order of consciousness but still better if they have achieved a fifth order of consciousness or (Kegan, 1994, Perry, 1970). Taking this into account we can understand why is collaborative learning so challenging and demanding. But one point we want to remark before describing in more detail these epistemic changes is the idea of challenge. It is the challenging context involved in the process of collaborating what can promote the development in all their participants. According to Kegan (1994), however,
the challenge is not enough unless it appears in a context which provides emotional support and trust for committing with a process of exploration.

The developmental demands for those students who participate in a collaborative learning can form a hidden curriculum of the classroom where students are expected to

"take initiative; set our own goals and standards; use experts, institutions and other resources to pursue these goals; take responsibility for our direction and productivity in learning" (Kegan, 1994, p.303).

These learning tasks implied in collaborative learning require the developmental capacity of a "self authoring mind" (Kegan, 1994). The problem with this hidden curriculum which involves the developmental demand of a self authoring mind is that research indicates that only 20% to 30% of adults reach that stage (Bar-Yam, 1991). Teachers are likely to encounter many students operating primarily out of the previous Interpersonal stage also termed as Socialized Self (Erickson, 2007). Those operating from this Interpersonal stage are embedded in or subject to relationships, roles and rules. They understand another’s point of view, even when it might be different from their own. They can subordinate their own point of view to the relationship and to another’s point of view. In this sense there is an interpersonal way of knowing valuing the social bonds above individual needs. Great stress may be experienced when interpersonal people are required to think outside of their traditions or when they must deal intimately with those whose values and beliefs differ from their own. They do not yet have the capacity to carefully weigh the differences and develop their own value system (Eriksen, 2006). It is easy to note that those operating out of this interpersonal stage still need an authority-base experience. The demands of many students asking for clear and quick answers for their questions, clear resolutions for the cases analysis, to know exactly what they have to do, what should they write in their diaries or blogs, what do you think as teacher about what they are doing in order to get a self-evaluation, etc.. All these examples are probably examples of this interpersonal epistemic way of meaning making. These students will be more comfortable following the clear and straight forward scripts of cooperative techniques but in order to move towards a self-authoring stage, teacher should challenge their way of knowing urging them to think about why they are doing what they are doing, asking them to have creative initiatives based on their own standards and criteria and establishing a separateness from others’ definitions. Put in other words, to be self reflective. As Eriksen (2006) states people operating primarily from an interpersonal balance may be motivated to do such internal work when confronted with naturally occurring ambiguous situations but teachers might also create ambiguous training situations (eg. ethical dilemma discussions; ambiguous situations they have to interpret) so as to challenge the interpersonal person toward the new self-authored balance.

In order to challenge students who are likely situated in this interpersonal stage to move towards the following self-authored stage, it is important to note a previous stated idea. The teacher himself should be established at least in that following stage. Although a collaborative context could lead all the participants (teacher included) towards a more complex and independent way of functioning, because of the demands hidden in its curriculum, it would be very difficult to tolerate. In words of Kegan that experience could go in over the heads of all participants.
Those who are in a self-authored or institutional stage can manage their relationships, roles and values. They are embedded in or subject to the institutions of which their roles are a part, to their jobs, and to the values or theories about how to regulate their roles and relationships. The institutional self does not ignore being influenced by the relationships but is bigger than that influence and not identical with it. Institutional knowers act on the belief that there is a higher value than the relationship even if acting on the higher value hurts and upsets another person. This bigger vision includes

“values about values” or “systems by which we can choose among our values when they conflict” (Kegan, 1994, p.90).

Teachers or students operating from this stage invent their own work. They are self-initiating, self-correcting and self-evaluating. They take responsibility for what happens to them. Thus they demonstrate increased autonomy, self-authored and owned behaviour; self-dependence and a clear identity which can remain constant across contexts (Eriksen, 2006). However, there is also an important limitation connected to this stage which is very important to note for collaborative teachers: they will feel vulnerable to whatever challenges their constructed self-system. There is a growing understanding that their theory or system about life, relationship, work does not reflect all of who they are and does not work in all situations. Thus to move beyond this stage they should question their previously held ways of making decisions. As Eriksen (2006, p.295) states:

“They find themselves yearning for challenges from other systems, for negative feedback that allows them to think about, re-evaluate, or make object their own system”.

Paradoxically they can commit themselves to transformation but fail to see that the product of these transformations is just as replaceable as the previous self-system. Obviously to go beyond this fourth stage it is important to transcend one’s previous identity. It is not so important who you are but who you can become.

The fifth order of consciousness, the Inter-individual stage which deals with multi-system complexity, is quite related with the idea of collaborative learning expressed by Anderson (1999). The following characteristics summarized by Eriksen (2006, p. 296) from the work of Kegan (1982) express the theoretically ideal description of a teacher capable of managing successfully a collaborative context: they (a) orient toward relationships, dynamisms, and tensions among systems of deciding (eg. relationships between quantitative and qualitative ways of knowing) rather than forcing decisions between one or the other, (b) believe such relationships are prior to the systems themselves; (c) envision motion, process and change… as the irreducible and primary feature of reality; (d) are nourished by contradiction; (e) become responsible for systems rather than to systems; (f) become more tentative and less certain about their theory, seeing that any system of operating is temporary, preliminary, and self-constructed and (g) transcend allegiance to the product

“in favour of an orientation to the process that creates the product” (Kegan, 1982, p.248).
Interindividual people can maintain an open, incomplete stance, admitting that they might be wrong, take a one-down, not knowing position that says to other people

“let’s co-construct our experience together” (Eriksen, 2006, p. 296).

As if it was adopted a collaborative motto, the interindividual person shift away from the new products of transformation onto the process of transformation itself, onto the conversations between systems, onto the whole or community or other-as-part-of-self.

All along these seven years we have promoted different changes in our students and in ourselves as teachers. The following excerpts illustrate some opinions and evaluations of the training process. They express not only their opinions about the classes and the learning process. For us they are interesting because provide different meaning-making examples as it would be proposed by Kegan. The students who wrote them were situated in different epistemic positions. Our purpose is to illustrate a variety of different ways of attending to our classes from interpersonal towards more self-authoring perspectives. It also serves to reflect about how a collaborative-experientially based approach can promote a transition from dependent ways of knowing towards more autonomous ones.

Narratives have been selected from three different courses. During course (04-05) we introduced cooperative learning (an elaborated Jigsaw structure) for the first time. Next course (05-06) we added the use of web-blogs and a virtual platform (Web-Ct) in order to promote the reflection and sharing of learning in progress, we also introduced interdisciplinary experiences through the coordination of several subjects belonging to Psycho-pedagogy studies. Finally in course 08-09 we added a more explicit work to promote key competences in our subjects. We have selected three different narratives for every course. They come from the students’ self-evaluations with the exception of the last three narratives of course 08-09 who were written after one month of beginning the classes. The narratives belonging to every course have been ordered on purpose. They represent three people expressing themselves from different developmental positions: from a more interdependent towards a more self-authored perspective.

**Course 2004-2005**

*Excerpt 1.* I knew already this methodology but I had never taken it into practice. I think that the idea of this proposal is very good but in my opinion, it is a system that finally does not work. It is quite pleasant and participative but if students do not respond it isn’t worthwhile because finally as in any typical group work, only work the same people. You have the risk that someone in your group will not understand his part and as a consequence the rest will not understand that part either.

*Excerpt 2.* I think that this subject didn’t focus on getting knowledge but also some skills such as watching, teamwork, being autonomous and not depending always on someone who tells you how to do everything.

*Excerpt 3.* All I’ve learnt is not something that completes my training from a theoretical point of view, it also helped me to rethink my ideas, I mean, it has provoked an intrapersonal conflict that has influenced not only my academic and professional development, but also my personal development. This is due to learning
came from any individual, his feelings and relationships and interactions with the rest of classmates.

**Course 2005-2006**

Excerpt 4. The web-blog was the worst issue for me- as you can notice I have not written, because I don’t like the idea that my classmates can read my notes, when I do not know if they are correct. Besides it was a problem not having a script about what to write even though I think that the idea is good because you can go on reflecting with your classmates out of the class.

Excerpt 5. If you had asked me that question 6 two weeks before finishing the course, my answer would have been quite different that this one I am going to give you today. Now I can tell you yes, I’ve learnt, and a lot. I’ve understood that we have to pose a meaningful goal, that the real achievement is not to do what teachers tell you to do, but understanding what do you want to do. I think I began to learn when I realized that there was something in the subject related to me. When I discovered something that is helping me to analyze the world we live in, and when I realized that the most part of times I get bored in a class or that I am discouraged with my studies, it is because of I’m just attending passively to information, without working with it. Even it could seem as if I’m liar, the time I dedicated to read the texts grew since then. I have gone deeply into them and I have reflected a lot about everything, but my satisfaction with what I got from the texts is much bigger.

Excerpt 6. We should not look for the answers in your comments but in ourselves, trusting in our own competence as knowledge creators, without waiting that your comments will give us the certainty we demand. We must attend to our creation process, trust in our own voice and competence. Achieved this, the need of your certainty, of your comments will vanish.

**Course 2008-2009**

Excerpt 7. The classes are very new for me from a methodological point of view, it distress me to feel myself lost and not knowing how to answer questions such as “what do you think we are going to do today/tomorrow?” “In your terms, why have we done this activity?” So in conclusion, right know I’m a bit pessimistic, not about the subject but about my learning possibilities. I hope it will change “tomorrow”.

Excerpt 8. I consider that I’ve learnt many things up to now: the ideas we express in the class, the meetings with different groups make me understand different perspectives which help me to reorder and increase the information I have (...) The truth is that at the end of any class I remain still thinking about what we did for a while because it seems to me a very different way of lecturing, we reflect and it is ok with me, though some times there are some aspects which are not very clear but in the following classes we inquiry more on that.

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6 Have you “learned” during the course? How and why?
Excerpt 9. The methodology followed during the classes, leaving many questions in the air, is helping me to reflect and having the sensation of “remaining thinking...” Finally, I would like to add that all we have talked in the class, be it good or not, provokes the creation of an unavoidable relation with my personal life, what could help me to know myself better.

Excerpts 1, 4 and 7 express a higher interest on content (what is learnt) instead of attending to the process of learning collaboratively. The emotions expressed are related with nervousness with the open process they are participating in. They are not used to create their own learning. They would prefer instead to follow clear specifications of what to do and what to know. They pay more attention to the idea of correct answers and not of correct processes and feel their work evaluated by the others.

Excerpts 2, 5 and 8 reflect for us “transitional” students. In general they understand that they are learning more than just a theoretical content. They can attend to the followed process and how they self-managed through it. They understand they have an active role in creating their own learning collaborating with the teacher and their class-mates. They understand they can self-author their learning, their motivation, and trust in the general process of inquiry.

Excerpts 3, 6 and 9 are example for us of a higher self-authored perspective. They are not only more autonomous in their learning, they also collaborate more actively with their classmates and the teacher. Beyond the subject content and even processes, they are conscious of their own personal changes. They are connecting the content and processes worked during the subject with themselves and the knowledge they have about themselves. They are more aware of the personal changes they are achieving.

In general all narratives show us the heterogeneity of our students participating in the collaborative contexts we have tried to create during our subjects. This developmental point of view has helped us to follow and understand better the process of our students. And of course it has been fundamental in order to understand our own experience as collaborative teachers. Knowing the complex demands involved in the creation of a collaborative class has helped us to facilitate the process for all the participants, we included as part of the process. As Smith and Sparkes (2005) suggest in the context of qualitative inquiry analysis possibilities

“life stories need to be subjected to multiple forms of analysis. If lives, stories, bodies, identities and selves (...) are multidimensional, constructed, complex and changing in time and with context, then researchers might seek forms of analysis that are sensitive to, and respectful of, this complexity and multiplicity” (p.214).

We could exchange the word “teachers” where it appears “researchers”. This idea of being sensible and respectful with the complexity, multiplicity and rhythm of our students is very important for us. Referring to academic objectivist research and their scientific reports, Bochner (1997) observed that

“the sad truth is that the academic self frequently is cut off from the ordinary experiential self. A life of theory can remove one from experience, make oneself feel unconnected” (p.421 in Sparkes, 2003, p.61).
Once again we want to connect this idea with the teacher profession. Collaborative learning could prevent teachers of being unconnected from themselves and others since connection and relationships are one of the intrinsic aspects of collaboration.

Finally we want to highlight that knowing the theoretical “epistemic stages” of our students and ourselves is very important to include a developmental and transformational bias in our approach to collaborative learning. But it would not be enough unless we had more accurate distinctions to track the process we are generating. According to this some distinctions we have borrowed from the systemic approach of John McWhirter have been crucial for us in order to generate a collaborative experience and make a better use of that experience. We have referred to them in previous sections but we want to remark some of them once more: the perceptual positions we attend from (subjective perspective) to different objects (objective perspective) in a multiple variety of contexts (contextual perspective), the processes of leading and following active and passively, the emphasis of taking into account the process and even the patterns that emerge from that process, etc… In the following section we will introduce the idea of pattern as one of the key competences we tried to work with.

9. PATTERNS TO PLAY WITH

The recent introduction of the concept of competence has promoted the revision of many teaching practices in the university education. The project “Tuning Educational Structures in Europe” is one of the best examples of the competence turn in Education. In connection to the typical role of collaborative teachers, an Education whose goal is the development of competences focuses on students rather than on the teachers who becomes a mediator figure with an attitude of openness, flexibility, tolerance and a high level domain in meta-cognitive and reflexive skills (Margalef, Iborra and Canabal, 2006). There have been a vast number of articles interested in proposing descriptive taxonomies of competences (Bajo, Maldonado, Moreno, Moya and Tudela, 2007) like basic competences (such as specific knowledges, to analyze and synthesize, planning and organizing, decision making, learning to learn, achievement motivation, etc…), intervention competences (applying knowledge into practice, adapting to new situations, creativity, working autonomously, teamwork, social skills, leadership, diversity appreciation, etc…) and specific competences (oral and written communication, second languages, use of technologies, managing information).

Beyond these descriptive taxonomies, from a pedagogical point of view, competences are understood as the capacity of engaging cognitive resources in order to cope with a specific situation (Perrenoud, 2004). A person is competent when is capable of reordering his learning to transfer it to new situations and contexts. The competence only demonstrates itself in practice. This practice far of being isolated and meaningless is completely adapted to a concrete situation.

This notion of competence is quite close of previous ideas mentioned in the chapter when referring to experiential learning and the need of creating real and specific learning contexts. But even though we agree with this general approach aimed to the promotion of competences we think it is too descriptive to be useful. To go beyond general descriptive taxonomies of competences or even endless lists of concrete competences, we need to study those processes
and principles which are really needed to learn and practice a concrete competence instead of taking it for granted.

So for example one key competence included in our approach in many of the subjects we have participated involves perceiving and constructing patterns. A vast array of learning activities such as interpreting a case from tests, narratives or movies, creating and applying a social skill program adapted to a specific group of people, connecting different texts and activities in order to construct a macrostructure (Kintsch and Rawson, 2005), following and comparing different lines of thought so typical in the McGuffin project, integrating the different contribution of participants in an interdisciplinary group, etc… demand the creation of complex patterns.

A pattern is a type of theme of recurring events or objects, sometimes referred to as elements of a set. These elements repeat in a predictable manner. The most basic patterns are thus based on repetition and periodicity. A formal feature of patterns is its integrity independent of the medium by virtue of which you have received the information that it exists (Fuller, 1975). Typical examples of patterns are the chemical elements, fractals, recurring decimals, chemical composition in minerals such as crystals, fashion, music styles and from a psychological point of view, each individual style of learning, habits, beliefs, identity and so on is in itself a pattern integrity evolutionary and not static.

We are interested in patterning as an example of competence because of its relationship with the construction of meaning and as an extension with contexts. According to Bateson (1979) we create meaning through patterns of connections with our world. Such patterns of connections comprise the context or contexts that provide the possibility of generating meaning. Bateson (1979) summarized succinctly the relationship between contexts and meaning as follows:

“‘Context’ is linked to another undefined notion called ‘meaning’. Without context, words and actions have no meaning at all… it is the context that fixes the meaning” (p.15).

In order to create a meaning for something or even to identify a context, we need to create or differentiate a special pattern, a type of recurring events or objects.

For example when a group of students are collaborating to make an inquiry project focused on analyzing a special case of a dyslexic child, they need to construct patterns. The underlying basic process to patterning is to connect. They need to connect all the elements or information available about that case: different tests, information obtained through interviews with the child, with their parents, with their teachers with their classmates. Any of this elements isolated provide information, but only taken as a whole can be connected to understand the big picture. Besides they have to connect all this information with more information they have obtained from theoretical and specialized books, articles, lectures in class, blogs, forums and even the discussions maintained with their companions in the group and other groups. Besides this could be even more complex if this case is part of a bigger project which involves students from other subjects and classes who are analyzing the same case from different approaches (Curriculum, Developmental Psychology, Family interactions and Learning Strategies). They will have to make more connections to understand the meaning provided by their companions coming from all those different classes. Interestingly the possible meanings of that project will be different depending on what contexts are being
created. Every subject and discipline would create a different context. More contexts could also influence the meaning of the participation. Participating in that project could be optional for those students who just are willing to learn more about theoretical concepts worked in their formal classes. But they could be forced to participate because they will be formally evaluated with a final exam about the experience. Even though these two contexts are not directly related with the task (a specific case) will influence the general meaning of the task. What does it mean for every student to participate in that task and how is that influencing in the quality of his involvement?

It is clear that this example highlights a spiral structure or pattern (Pareja, 2008) which includes multiple perspectives and loop processes giving as a result increasingly complex and cyclical patterns of connections. Bateson (1994) suggests that learning occurs when various experiences and ideas interconnect as they spiral together over time. Such an approach can be established by providing students with opportunities to engage in learning experiences and lines of inquiry arising from common over-arching topics or questions.

According to Bloom (1999) this view of learning is based on non-linearity of thought processes and on variation, with the purpose of creating (1) more cohesive and elaborate understandings, (2) an emphasis on meaning rather than de-contextualized contents, (3) an emphasis on creativity, (4) a greater sense of connection to the learner's world and (5) the development of a sense of ownership over what is learned.

To create a pattern it is necessary to connect elements to go beyond. There are different ways of connecting but the key processes involved require comparing elements. Different elements or events (being chapters, ideas, exercises, cases, subjects, opinions, etc...) can be contrasted in order to focus on their differences or compared in order to add their similarities as well. Noticing differences and similarities, and differences and similarities with these differences is the background process needed to create a pattern. Because of this we present different information grouped in sets of at least three events, experiences or other kind of element. The Mcguffin project is just one example of this process. It can be just an excuse for comparing classes, ideas or readings in search of a common hidden theme, but also with its transversal structure, it implies an invitation to connect those peripheral issues with the most central one's in order to lead beyond our understanding of one topic. In both cases we encourage our students to practice this idea of connecting elements because then there will likely emerge new patterns of meaning.

10. CONCLUSION

It is not easy to define an experiential, non-linear way approach of collaborative learning. Because of this we hope that the reader will have now a better idea of our way of dealing with collaborative learning in the frame of graduate and postgraduate studies.

As it has been stated all along the chapter the key for creating such a special kind of learning is based on the idea of context and its relationship with meaning. We are very interested in leading the creation of contexts which promote the development of our students inviting them to be more self-authored and autonomous while having to collaborate with other students and the teacher in order to carry out a learning task usually related with inquiry processes. Managing social skills and promoting complex competences like the creation of patterns are special elements needed to make easier the whole collaborative process.
Although we make use of many available technological options such as virtual platforms, web-blogs, forums and wikis, we don’t consider them a central aspect of our approach. Undoubtedly new technologies make easier the supervision of many individual and group activities, transcending the usual limits of a class in terms of both space and time. And the generation of networks of blogs is also one of the most interesting features of our approach. However new technologies represent just one more alternative of action of what we do. They don’t add so much to other interesting levels of how to do something and why doing it. Specifying methodologies and their processes involved and the epistemologies and their principles implied is more challenging than merely relying on technological alternatives. Although of course they are an interesting part of our general approach they don’t represent its essence. Attending to the nature of our relationships with our students and the special context that emerge from that based on principles of open collaboration are more salient features of our approach.

The following table summarizes a list of possible suggestions which have the purpose of serving as general indications to reflect on how to perform a collaborative experience.

These general suggestions are an example of an open calibration process. As in any calibration process the key is the information obtained from the multiple feedbacks and what is done from there. A key assumption for us, as it was stated when referring to leadership, is that it is needed to follow our students in order to lead them. Making use of their feedback provides an opportunity of following them instead of just imposing content, explanations, exercises and practices that are disconnected of the possible emergent process. Besides students have the opportunity of leading the process through their active participation in the process and explicitly in the feedback moments. It is then when they can make questions, ask for clarifications, provide summary and examples of their own understanding, etc… Taken as a whole both teachers and students become involved in a systemic collaborative process that develops through time.

<table>
<thead>
<tr>
<th>Table 2. Suggestions to promote a collaborative learning experience based on calibrating processes.</th>
</tr>
</thead>
</table>
| 1. Consider what is the content you have to work with and ask yourself  
  a. Why is it interesting according to your discipline?.  
  b. What are the main competences related to that content or subject?  
  c. What can you do differently in comparison with your students when applying the topics of that subject? What are the main processes involved?  
  d. Once identified the main process or processes, how could you work or practice them? What could be considered a good example of practice?  
  2. Consider and ask your students about  
  a. The reasons for attending to your class?  
  b. Their purposes and goals beyond passing the subject?  
  c. Their tacit knowledge about the general topic and even their previous competences and skills in relation to that topic.  
  3. Initiate the class presenting a big question or challenging problem which underlies the subject (in the context of your discipline from a theoretical or professional point of view). This big question could be an example of McGuffin (it will never be answered completely) but a good starting point.  
  4. Connect when possible that big question with some goals or purposes expressed by your students.  
  5. Begin the exploration of some topics related with that big problem. Before presenting any |
formal information or model how could it be possible to explore that topic?

6. Listen carefully the feedback of your students from their exploration attending to their understanding in that moment. From there consider what would be more interesting in that moment in order to advance through the exploration process
   a. Reading some theoretical texts?
   b. Providing a formal explanation to some point?
   c. Suggesting a practice, new exercise or experiment?

7. Put into practice your previous decision and wait until you have a new feedback from the exploration work of your students and repeat step 6. A first loop possibility or research cycle begins here.

8. Compare the inquiry process followed by your students and you in terms of your previous considerations exposed in step 1. Are you separating too much from there? Is it good or not? Are you following it too strictly? Is it good or not? Is the main content being covered? Are the main skills being practiced?

9. Attend to the performance of your students.
   a. Are they coming to your class?
   c. How do they look like working in groups? Would it be interesting changing the natural groups they make? Would it be interesting mixing them?
   d. Is it needed to explore directly with your students about their own learning process?
   e. According to this feedback can you change something in step 6? Is it worth adding new content, exercise, question?

10. From feedback coming from steps 9, 8 and 7 go on calibrating the whole process revising the direction framed at the beginning and even considering the appropriateness of that direction.

11. Consider when it would be useful to begin to finish the exploration process in order to present a more objective product as a result of that process. Initiate convergent processes to finish instead of opening new divergent lines of thought.

We would like to conclude the chapter with a final excerpt with summarizes many of the ideas expressed in the previous sections. It is a text written by a student of doctorate studies, published in her web-blog at the end of a collaborative process this current course. She is reflecting about her learning process in connection to a final evaluation task consisting in a short movie filmed and acted by her work group. The idea of how did the group decide to be evaluated was the beginning of this final project. They decided to film a short movie where they could reflect and show many processes and knowledge worked during the subject.7

“It seems incredible that a process like this can change someone, it seems exaggerated to say that maybe I’m not completely the Mary I used to be. I don’t pretend to say that I’ve changed radically, that I’ve seen the light... ha ha ha... But yes, in that moment I had my opportunity of expressing what had changed in me during the process (...)From my point of view when we began to work I was quite square minded. Look, after telling to myself that it is important to respect every person rhythm, that it is important to discover being helped by others, that we have to change our minds to evaluate that situation that will take us to another one where everything would be clearer... after saying all that to myself I realized I wasn’t respecting neither my time nor others’ time and of course I was collaborating with my classmates, only if they had the same idea about the work than me. I’ve realized that the theory we worked with in the classes, the ideas I got from texts or
discussions, even the reflections that suggested me the opinions of my classmates, from blogs, all what I had learnt was conditioning was I wanted to do, the way I was doing it and why I was doing like this. I realized that I needed to make explicit what I had learnt for not letting aside none of the distinctions we had been talking about and that influenced so much how we learnt, how we developed, how we made meaning of things.

Because of that I began step by step. I began trying to collaborate, interchanging impressions, ideas... but very early I had doubts. Were all of us sharing the same goals? Were we listening to each other? How were we doing all this and why? All these questions disappointed me at first. I did not understand how we were going to collaborate if we were not collaborating at all or better said... to collaborate as I understood we had to collaborate.

To be sincere I don’t know how it happened but one day I simply let myself go and decided not worrying so much about whether what we were doing coincided with our original purposes or my own purposes. I decided to come back again to learn and just experiment the sensation of working, listening to others and lowering the pressure of big theories and ideas we had worked so much during the classes. I decided to trust in the group. I decided that for achieving good results things have not to be necessarily as I think they should be. It was not easy but I also trusted that our final result would be even better that my original idea. (...) I dared! Yes...(...)

Now looking back I realize of a couple of things. I think that I would have never understood collaborative learning unless I had decided to “let myself go”. Now I realize that all those ideas, knowledge and theories we had been working, discussing, constructing were included in the process. It was not needed to make them explicit. What I needed was living them (...)Of course when I relaxed I found that there were many situations I could understand, now having more tools than before, I mean, through different situations I was conscious of different ways of interpreting them, giving sense to them, for achieving information and using them to influence positively the group development. In some moments I made them explicit. Some others I didn’t. However all that gave me the opportunity of going beyond, to think about it and noticing those limitations that worked as a blindfold of my eyes.

I believe that before objectifying something one has to understand it, to feel it, to live it. But not living it during one class, not out of context without using them on purpose. Of course without those formal sessions I would not have been able to reflect about that experience. (...) I’m not proud only of the work but of how we did it. I’m proud of people, of their involvement, of my own involvement. I can say I feel more responsible and owner of a work as I never had been. I thought that as a consequence of sharing it and, constructing it we could notice every particular contribution. But that was not the case. This work is not mine, neither of Lara, Val, Angelica, Itziar, Maite, Dori or Dani. This work is a synergy of all of us. (...)

7 The students prepared also a trailer which was uploaded in you tube: http://www.youtube.com/watch?v=zviTrkeECCU
I think I’m somebody more open to listen new proposals, to look beyond, to work with others. I’m all of this but I’m also defending this approach in the class, through critical reflection, in one blog. Yes it could be said I am collaborative.”

In this last excerpt it is possible to notice many issues mentioned along the chapter that will serve to conclude it. This student expresses what meant to her to participate in a collaborative process. We would like to highlight three final ideas. First one concerns the developmental changes she perceives in herself. In terms of Kegan’s theory we could say that she is expressing the typical initiative, responsibility, commitment and critical ideas belonging to self-authoring ways of functioning, and even in the process of going beyond towards the Inter-individual stage. Second idea deals with how she is giving sense of these changes as a consequence of participating in a collaborative learning experience. Only when she dares to go beyond her autonomous and independent way of learning which implied imposing to the others her way of understanding the task, she can truly collaborate. The collaborative context promote this kind of transcending one’s own way of doing, understanding things in order to integrate other’s point of view. It is a good example of transcending fourth order institutional self. The expression of “letting myself go” is a good metaphor for expressing the underlying process. Only when she trusts in the group and the processes they were creating, the true collaboration takes place. Third idea is related to the importance of creating a real experiential context in order to put into practice and make real all the theoretical and process distinctions that we had been working with previously. It is another good example of situated learning and how meaningful learning can emerge from freely chosen tasks. Finally it is not the experience by itself what can promote so many changes. It is also needed to provide useful process distinctions to reflect on that experience such as the nature of the contexts involved in the situation or what kind of patterns can emerge⁸. The following table summarizes some of the distinctions we have been using along the chapter:

<table>
<thead>
<tr>
<th>Why</th>
<th>Context</th>
<th>Attending in</th>
<th>Pattern</th>
<th>Principle</th>
<th>Open collaboration, learning together, development, social constructionist, etc…</th>
</tr>
</thead>
<tbody>
<tr>
<td>How</td>
<td>Subjective</td>
<td>Attending from</td>
<td>Process</td>
<td>Policy</td>
<td>Perceptual processing, communication processes, leading and following active and passively, comparing attending to sameness and difference, etc… Curiosity, commitment, self-authoring…</td>
</tr>
<tr>
<td>What</td>
<td>Objective</td>
<td>Attending to</td>
<td>Protocol</td>
<td>Procedure</td>
<td>Cooperative techniques, formal scripts or instructions</td>
</tr>
</tbody>
</table>

⁸ For example she realizes about her own changes because she can compare how she used to behave before in contrast with how she had behaved during the experience. From the comparison of at least these two different examples of ways of working in groups, she can have a different conception about herself and her learning options.
We read once a quote, supposedly said by Brian Eno, the famous music producer, concerning with his relationship with David Bowie. He mentioned the following idea: “Every collaboration helps you grow. With Bowie, it's different every time. I know how to create settings, unusual aural environments. That inspires him. He's very quick”. We would like to finish with this idea. As music producers we would like to create familiar or unusual settings which could inspire our students and ourselves, in order to grow. Maybe our students, as Bowie, will demonstrate how quick they are when challenged by this kind of special learning context we would like to encourage.

REFERENCES


