Coming from outside the Academy. Values and 2.0 culture in higher education

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This article reflects on how some values, interests, and particularities of 2.0 culture enter on higher and postgraduate education institutions. Through the identification of the features of 2.0, this document visualizes some of the resistances, obstacles, possibilities, and opportunities detected in these institutions, many of them focusing on the core of the higher education and postgraduate institutions (i.e. strategic vision, methodology, role of teachers and students, relation between formal and informal learning, contents and assessment). Responsibility in the training and updating of current and future professionals places these institutions under the discussion and decision-making process related to the role that 2.0 tools should play. We wonder if it implies a crossroad which affects the whole set of attitudes and values on the role of training institutions in the context of the construction of socialized knowledge.

Keywords: 2.0 culture; higher education; values; learning experience

Web tools 2.0 and training institutions: still more questions than answers?

Web tools 2.0 have burst in higher educational institutions and seem to have come to stay. Several studies (Ajjan & Hartshorne, 2008; Behrend, Wiebe, London, & Johnson, 2010; Boulos, Maramba, & Wheeler, 2006; Pang, 2009; Simões & Borges, 2008) confirm that the last five years witnessed a more-than-significant increase of these resources in higher education, as its use by both lecturers and students keeps growing. As any other innovation in the educational field, criticism and adhesions emerge in multiple forums and discussion platforms thus giving rise to multiple discussion focuses and immediate future perspectives. Nevertheless, one of the still-scarcely-studied views is the set of values derived from the use of tools 2.0 in formal training spheres, especially in higher education and postgraduate institutions.

Some of these values emerge from the reflection on how these tools 2.0 influence teaching–learning processes, for example, in crucial aspects such as teaching methodology, production and transmission of content, the role of teachers and students or the options for assessing the knowledge acquired. Nevertheless, the main problem does not seem to be with operational aspects.

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The main difficulty seems to be with values inside the institution. Values of higher education were built up under other historical moments, times marked by a traditional vision: the Academy was the main builder and keeper of the knowledge, and had – indeed it still has – to defend this position. There was no doubt on who generated knowledge in higher education institutions. Social evolution led to the consideration of this system; however, changes in knowledge generation by means of tools 2.0 led to a great crisis. The characteristics “hierarchical, substantially introvert, guarded, careful, precise and measured” (Committee of Inquiry into the Changing Learner Experience, 2009, p. 9) imposed a so-called tornado (which breaks the established order of things) by tools 2.0.

It seems that postgraduate institutions and business schools are those who have incorporated these tools more than higher education institutions. Under the prospects of the demands from the productive sector, tools 2.0 have been incorporated as an additional element in the development of professional competences and as frequent tools to personal learning.

Anyway, it is rather evident that tools 2.0 bring their own values, preferences, expectations, and processes. It also seems that all these riches come from “outside the Academy” – in terms of social demand – and, as any other unexpected night intruder, may therefore let themselves be observed as such, thus becoming true threats.

**Social demands to higher education institutions**

Social, technological, and training tendencies in the present-day market are for communication, collaboration, and participation as basic substrates in this relation between the production sector and higher education institutions; the former not being precisely unaware of them, since they are strongly promoting these new procedures.

Companies are implementing these new procedures in view of the need to orientate their business. From the viewpoint of directors, the learning objectives of training contribute direct value to the organization when they impact on business objectives. This is the main meeting point between social and training tendencies in the business world.

- Training departments in these organizations bear in mind the informal-learning processes which take place among their workers, since the knowledge they generate impacts on their business results.
- The spaces to learn with work colleagues at the workplace orientate training toward the solution of specific working problems.
- Databases of shared experience, interconnected documents, or colleague-recommended links become key information to both learn and face working challenges.
- The elaboration of contents by working colleagues as a result of their learning process is more useful for the remaining employees than those elaborated by external experts who are alien to the organization, since the former contents are generated according to its context, processes, and culture.
- Learning is performed just-in-time, when required, unlike the learning model to be developed out of the workplace, which thus involves additional efforts to transfer learning to specific workplaces.
From our viewpoint, demands in the production sector are key axes in the configuration of the lifelong higher education system, as this system does not only train future professionals but also currently active professionals.

Not only universities or training companies are training institutions, but nowadays all companies are learning institutions. All companies manage people who learn and have access to technologies both in and out of their working timetable that impact on the ubiquity, immediacy, and mobility of their learning.

Creation, participation, collaboration, and learning processes have evolved in our society and are currently accelerating the inclusion of the training sector into the use of the 2.0 philosophy, thus leading it toward innovative procedures and new values which re-orientate the training and learning task (Alexander, 2006; Brown & Adler, 2008; Downes, 2005).

**Higher and postgraduate education and 2.0 tools: synchronized?**

Implementing the 2.0 culture in education bears directly the condition itself of higher and postgraduate education levels (Ajjan & Hartshore, 2008). They are mostly aimed at accrediting that participants are capable of coping with a given professional field, or helping participants to update their professional practice in a given sector. However, these institutions cannot forget what participants will be doing after the end of the course: participants will keep on learning everyday.

The conception of postgraduate training should intrinsically entail lifelong learning, and therefore it should promote learning abilities to assure that participants acquire the necessary capacities to keep on learning – on their own – afterwards. In this sense, 2.0 tools are relevant because they are important ways to foster the development of learning-to-learn competences.

This situation – added to other needs such as learning in mobility or game-based learning – disorients the Academy, as it is used to working under (1.0) traditional learning parameters (Weinberger, 2007; Weller & Dalzier, 2007). Is the Academy mentally prepared to integrate these tools, not because this integration is demanded by the society but because it values their inclusion in teaching–learning processes positively?

**The values of higher education and the values of web 2.0**

The initial definition of the concept web 2.0 contributed by O’Reilly (2005) (i.e. the collection of web-based technologies and services, many of which are designed to facilitate collaboration and sharing between users) involved a set of intrinsic particularities such as “trusting your users, rich user experience, non-predetermined user behavior, the use of web as a platform, or harnessing collective intelligence”. Web 2.0 goes beyond the simple use of a specific technology and creates the so-called “attitude 2.0”, a way to communicate and learn associated to a set of values progressively defined at the same time as they are developed, consolidated and generalized.

The inclusion of these tools into higher education has opened a set of new options and debates (Weller & Dalziel, 2007) on its main defining axes: the role of teachers and students, content generation, methodology or evaluation systems. Among these debates, the contrast between the values of tools 2.0 and the values of higher education emerges as a key.
Can the values of tools 2.0 be said to oppose or supplement those of the Academy? What kind of stresses do they generate in higher education, especially in its teaching–learning processes, after the introduction of tools 2.0? According to Weller and Dalziel (2007), the values of web 2.0 seem to oppose or at least contrast those that characterize higher education. Authors determine the existence of some points of conflict that emerge of the interaction between the Academy and Web 2.0 and are related to the conceptual differences existing between them. The inclusion of tools 2.0 is thus preceded by a certain clash with the traditional values that are an intrinsic part of the Academy.

Some of the features that characterize higher education and tools 2.0 (following Walton, Weller, & Conole, 2008; Weller & Dalziel, 2007, among others) can be briefly summarized as follows:

| Higher education | Web 2.0 |
|------------------|---------|
| Hierarchy | Hierarchy of the system | Peer collaboration |
| Content stability | Content permanence | Content in perpetual beta |
| Control of the learning process | Control is mainly held by the institution | Control is mainly held by the participants |
| Participation | Top-down process | Bottom-up approach |
| Evaluation | Formal and unique assessment | Multi-option assessment |
| Approach | Content-oriented process | User-generated content |
| Content validation | Scientific content validation | Peer-to-peer content validation |
| Publication process | Editorial content production | Direct participation of the users in content creation and validation processes |
| Communication | Unique communication direction | Interactive and group communication |
| Support to... | Formal learning | Informal learning |

From the viewpoint of training, these particularities are associated to different ways of generating and validating knowledge, as well as to different ways to understand training processes. At the same time, each of them is associated to one or more values, which are put into practice in the behaviors and attitudes of the members who assume and apply them.

Exploring the possible values associated to each of the parts (higher education vs. tools 2.0) certain coincidences and divergences can be observed. From our viewpoint, the latter are not necessarily opposite.

| Particularities of higher education | Associated values |
|-----------------------------------|-------------------|
| Hierarchy of the system | Authority |
| | Competence |
| | Differentiation between levels |
| | Difficulty to refute authority |
| | Team-work |
| Content stability | Honesty |
| | Transparency |
Higher education is known to have evolved from its initial theoretical values, but it is also true that most of them are still valid nowadays. Against this immutable validity, the values of 2.0 appear. Are they different, supplementary, conflicting, etc. values? What are the main values arising from tools 2.0? For instance, these may be summarized as follows:

| Particularities of higher education | Associated values |
|------------------------------------|-------------------|
| Top-down process                    |                   |
| Leadership                          | Leadership        |
| Corporatism                        | Corporatism       |
| Asynchronicity                     | Asynchronicity    |
| Unidirectionality: from the Academy to the public | Unidirectionality: from the Academy to the public |
| Public interest                     | Public interest   |
| Formal and unique assessment        | Consensus in the generation of unique evaluation protocols |
| Generated knowledge                 | Content organization and generation according to their field of knowledge |
|                                    | Transfer, generalization, and certain time permanence of generated contents, theories, etc. |
| Scientific validation of the content | Contrast of information sources |
|                                    | Validation of the authority |
|                                    | Scientific thoroughness |
| Content production and publishing process | Validity given to intermediaries |
|                                    | Acceptance of “valid” concepts |
|                                    | Security |
|                                    | Profile specialization |
| Unique communication direction      | Role separation |
|                                    | Univocal producer–consumer relation |
| The institution mainly controls     | Previous planning |
|                                    | Sequence control |

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| Particularities which define Web 2.0 | Associated values |
|--------------------------------------|-------------------|
| Participation                        | Diversity         |
|                                     | Reciprocity       |
|                                     | Transparency      |
|                                     | Respect to different opinions |
|                                     | Socialization of individual knowledge |
| Content in perpetual beta           | Immediacy         |
|                                     | Openness          |
|                                     | Synchronicity     |
|                                     | Spontaneity       |
|                                     | Knowledge temporality |
| Bottom-up approach                  | Consensus         |
|                                     | Independence of ideas |
|                                     | Mutidirectionality: from everybody to everybody |

(continued)
Both tables show that rather than opposing values, they were born according to the needs to be covered by both ways of communicating, generating knowledge, and learning. Nevertheless, the arrival of new inputs caused by tools 2.0 leads to a set of questions and doubts which higher and postgraduate education institutions are beginning to discuss nowadays and which undoubtedly impact their own raison d’être.

**When the Academy feels that it loses “control” again**

One of the traditional long-lasting arguments: 2.0 tools lead the University to lose “control” again. This argument has emerged in educational spheres along history (the appearance of the printing press and the wide diffusion of literature, the arrival of the mass media, the burst-in of the Internet, etc.), but does not seem to have emerged with so many evidences.

This has probably become one of the main reticence factors emerging from the use of 2.0 tools in higher and postgraduate education. As Brown (2010) points out: “the distinguished feature of Web 2.0 is that it empowers individuals to take control.” Out of the set of possible questions generated on 2.0 tools, this is the question we shall tackle and reflect upon in the present article.

The key question would initially be: to what extent inputs from outside the Academy in relation to 2.0 tools mean, enable or boost higher and postgraduate education institutions’ lose of knowledge control? Logically, from the values mentioned above, several other related questions stem from this general one:

| Particularities which define Web 2.0 | Associated values                                      |
|-----------------------------------|-------------------------------------------------------|
| Multi-option assessment           | Openness                                               |
|                                   | Importance of crossed evaluation                       |
|                                   | Adaptation to individualities                          |
| User-generated content            | Autonomy                                               |
|                                   | Catering to individuality                              |
|                                   | Sharing                                                |
|                                   | Accessibility                                          |
|                                   | Generosity                                             |
|                                   | Needs and experiences as generators of content         |
| Peer-to-peer validation           | Critical judgment                                      |
|                                   | Social empowerment                                     |
|                                   | Individual interpretation and reflection               |
| Interactive and group communication | Openness                                              |
|                                   | Autonomy                                               |
|                                   | Collaboration                                          |
|                                   | Co-creation                                            |
|                                   | Over-extension                                         |
| Informal learning                 | Immediacy                                              |
|                                   | Spontaneity                                            |
|                                   | Interaction                                            |
|                                   | Non-structured nature                                  |
|                                   | Autonomy                                               |
|                                   | Problem-solving orientation                            |
|                                   | Distributed learning                                   |

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|                                   | Accessibility                                          |
|                                   | Generosity                                             |
|                                   | Needs and experiences as generators of content         |
| Peer-to-peer validation           | Critical judgment                                      |
|                                   | Social empowerment                                     |
|                                   | Individual interpretation and reflection               |
| Interactive and group communication | Openness                                              |
|                                   | Autonomy                                               |
|                                   | Collaboration                                          |
|                                   | Co-creation                                            |
|                                   | Over-extension                                         |
| Informal learning                 | Immediacy                                              |
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|                                   | Autonomy                                               |
|                                   | Problem-solving orientation                            |
|                                   | Distributed learning                                   |
What does this mean within the framework of a training offer in higher or postgraduate education where guidelines on methodology are set by academic directors to be followed by their teaching staffs?

How can institutions promote the use of 2.0 tools and the follow-up, at the same time, of the values transmitted by their teaching staffs on these tools?

How should the interaction between formal and informal-learning processes be?

From the viewpoint of content generation, so far “owned” by the Academy, what do 2.0 tools mean?

How can a coherent evaluation process be articulated gathering all existing inputs? Should we generate tools to follow-up spaces and times in which distributed learning takes place?

The logical closing issue concerns the strategy: Should there be a strategic institutional position regarding the use and the implementation of web 2.0 tools in universities and training institutions? From the point of view of cultural evidences, are these institutions prepared to implement these decisions?

Just to contribute a brief list, with the aim of opening discussion on these issues, our reflection shall set off from the accumulated experience from the viewpoint of university higher education and postgraduate specialized training; two spheres which are to incorporate 2.0 tools so as to reach an integral training process of their clients.

**Teaching methodology and 2.0 tools: implications in the actual framework**

The teaching methodology consists on the staging of the teaching professional’s set of ideas, concepts, and processes on his/her knowledge field. However, the methodology essentially influences his/her own conception of the teaching–learning process, it means, the relation between the elements of the triangle formed by teacher–student–knowledge. At least, it has traditionally been this way.

When lecturers apply a given methodology in the classroom, they are assuming and therefore presenting a specific way of relation between them and the students, between them and knowledge or among students.

Using 2.0 tools question this triangle. Specifically, they seem to question the weight and existing relation among its vertices. Particularly, both teachers and students acquire a sense of multidimensionality, much more powerful than that existing up to date. Several processes take place within this new context articulated by 2.0 tools: some new functions are incorporated, others are interchanged, others are redistributed, etc. (Grané & Willem, 2009; Väljataga & Laanpere, 2010).

Training professionals within the framework of developing professional competences implies several instructions and suggestions on methodological approaches: for example, methodology should boost professional competences, articulate learning activities based on daily situations and problems, incorporate educational materials presenting situations from labor spheres, etc.

The incorporation of 2.0 tools influences the conception of teaching and learning process: it is now perceived as an open, autonomous, participative, and distributed process in which students have a decisive weight and become its central focus. This agrees completely with the new guidelines of the European Higher Education Area (Goñi, 2005; Prague Communiqué, 2001; Rué, 2007).
Nevertheless, the introduction of 2.0 culture in the teaching methodology demands the entry of processes that take place outside formal training frameworks and therefore are more characteristic of informal learning. As Coombs (1985) states: informal learning is characterized by its spontaneity, non-structured nature; takes place in different situations in our everyday life, in varied environments, atmospheres and moments, etc. Informal learning is updated and inquisitive, takes place through the interaction with the others and the environment, in spaces not prepared for regulated education, etc. Are not these the characteristics of the learning derived from 2.0 tools? Are not these some of the values that corporations and companies demand from the training of future professionals? (Eraut, 2004).

Thus, training professionals are demanded to be capable of coping with these new demands, and therefore to redesign their role as mediators in the teaching–learning process, thus becoming tutors, counselors or guiders in the relation among their students and between their students and knowledge. The latter relation initially begins at the training institution but is likely to go along the directions contributed by the students.

At the same time, students are also asked to take the initiative and are pushed to develop (with 2.0 tools) the very same competences they will have to put into practice within their professional field, often using the same 2.0 tools from which these competences were acquired. In regulated education situations, trainers keep guiding the teaching–learning process: common negotiated objectives, interaction times, negotiated guidelines between students and lecturers, evaluation times, etc.

Nevertheless, we cannot leave aside other realities that place teaching mediation in a less advantageous position: for example, when students use 2.0 tools as a supplement to the course (sometimes even outside its limits) as a means of interaction and generation of new knowledge with their partners; or, for example, when the institution requires the teacher to use these tools without being agreed. The use of 2.0 tools in this case is different. Students (on their own) decide to articulate a joint interaction platform in which the common interest focus is initially the training course they are registered in. This platform allows them to discuss course-related issues, create parallel workgroups and a pseudo-section of job vacancies, information interchange, etc. All this remains beyond the control of teaching professionals, their methodology, and the channels established in the training context, but is undoubtedly part of the shared knowledge generated from “outside,” often covering the needs, expectations, and values these individuals – as well as the market – are interested in.

In view of this, the challenge faced by higher education institutions is probably that these processes take place naturally in training programs, thus being incorporated as learning elements. Because, when these institutions talk about the methodological uses of 2.0 tools, are they incorporating these tools as instruments for dissemination and exchange of information? Or, they talk about new media that really enable new ways of experimenting an autonomous, asynchronous, and distributed process of teaching and learning?

Boosting the pedagogic use of 2.0 tools according to institutional strategic values

Lifelong learning institutions and business schools are generally non-profit private training foundations associated to university groups. Business schools have progressively positioned themselves as training companies of directors and try to
differentiate themselves from the rest, as they compete in a highly demanding market.

Within this context, institutions define the methodological lines they expect their internal and external collaborators to develop, as well as the value lines they expect their training actions and activities to promote.

Thus, for instance, while some institutions feel comfortable promoting conservatism (associated to some values such as reflection, the vast culture of their employees, serenity in analysis, or process protocolization), some others look for modernity and transgressor spirit, dynamism, flexibility, speed in analysis, or high level of presence and visibility in congresses and the media in their teaching staff.

Although values are the cornerstones in defining corporative cultures, the values of a company or institution end up being known not by a document presenting them in a clear way – few companies have specified them in a formal deontological code – but by everyday experience. Some key activities in a training institution distil values, such as the election of contents to be taught, the approval process of learning activities to be developed, methodology description, and evaluation process. That is, what is the academic and methodological line that the educational community of a given institution must follow?

One of the key issues leading to success in the put into practice of 2.0 methodologies is the cultural change they involve. However, as in most transformation processes, change demands institutional commitment of the high hierarchy as well as the designing of a plan and the indicators to analyze if it is being followed, the involvement of the base of the organization and demanding global participation.

Institutions related to university groups try to make cultural changes as society demands, but some problems have to be faced: high hierarchy periodically changes with the election of a new director team, new strategic values are not explicit, and are difficult to transmit to the whole education community. Consequently, the organization is only aware of the need of changing but there are no directions to make it possible. In a continuous evolutionary process, the organization will mature progressively.

When informal-learning values and expectations enter the Academy

Informal-learning processes are progressively being incorporated into the everyday activity due to the so-called second web revolution. The Internet has become a shared space where experiences and conversations are always alive, thanks to the direct involvement of those who, so far, had been passive receptors of information, and now have become active users and producers of contents in the web.

The birth of the social web does not only mean a new way to relate with the others, but also a new way to work and understand learning. The user is the focus, is autonomous, and emphasis is no longer laid on information architecture but on participation architecture. Different spaces, tools, and strategies are being fit out to promote the relationships among users and collaborative work outside workplaces.

Since some decades ago, training institutions and business schools have faced the challenge of bringing training closer to the needs of a workplace, of calculating the impact of training on the profit account of the organization, and of professionalizing training designs in their programs. Tools in the 2.0 model place the user at the heart of an interchange and participation model which allows generating open work and
cooperative dynamics aimed at solving everyday problems with the help of expert partners on particular topics.

This change of paradigm promotes collective intelligence in organizations through the available tools. As O’Reilly (2005) points out, a true application of web 2.0 is the one that improves as more people use it, since the true heart of 2.0 tools is the capacity to harness collective intelligence.

In the business world, the conclusion drawn has been rather clear: if this web-work model fosters the participation, communication, relation, team-work for a common objective, sharing resources and adding efforts, it will allow the creation of synergies to improve the organization’s performance. It must allow documenting the processes and results of collective intelligence, favor work optimization, knowledge management, and learning from the experience of the others.

As a result of the evolution in the everyday activities and procedures developed in organization and companies, and proof that 80% of the learning in companies is informal, the latter have increased their demands to training institutions in order to try to plan and implement continuing learning processes by means of knowledge products which break up the corset of the course. Formal education is conceived as another strategy, but not the only one to train employees in organizations. This proves that not only the concept of formal learning is being questioned. Besides, companies demand informal-learning products as valid learning strategies (Eraut, 2004).

What hinders then the incorporation of 2.0 training processes to the procedures of higher and postgraduate education institutions? What benefits do companies perceive that are not perceived by higher education institutions? Is informal learning only applicable to professionalizing processes and not to initial training? Does reticence fall on the use of collaborative work tools rather than on the strategy? Most 2.0 tools involve working with cloud computing services. Is this the key factor behind reticence to publish information on the web instead of in spaces of university-controlled servers?

A touchstone: reconsidering the role of contents

One of the classic functions attributed to higher and postgraduate educational institutions have been researching in different fields for the subsequent selection, generation, and diffusion of new information and knowledge. As we argued, the values of the higher education imply that information and knowledge are traditionally ruled by reliability, contrast and truthfulness criteria, emerging from practices adapted to the deontological codes of each knowledge field.

Then, what happens in an educational environment in which these criteria oppose, substitute, combine, and supplement with those that we identified, for example, like immediacy, diversity, consensus, or accessibility? The entry of 2.0 tools means that the functions of information and knowledge selection, elaboration, and diffusion blur. These functions are distributed at both sides of the teacher–student (Academy–society) binomial. Weight had traditionally fallen on the trainer, whereas now both of them are information producers and knowledge generators.

Now the question may be: on equal terms? Depending on our viewpoint: on equal terms in the sense of the value attributed to the generated information. Members of 2.0 communities attribute value to the generated information according to the value it gives to the group.
But then, what criteria rule the information selection, elaboration, and diffusion processes developed by each of these two participants in the teaching–learning process? Who defines these criteria? In training contexts in which lecturers propose the use of 2.0 as a learning tool, lecturers keep on gathering weight in the truthfulness and validation of the information generated at the heart of the group. Is it in the “space of the group” (Committee of Inquiry into the Changing Learner Experience, 2009), under certain limits and spaces of learning, where these criteria are chosen, shared and agreed upon? The accumulated experience, updating, popularity, knowing how to say, etc. probably become the main credibility criteria at the heart of 2.0 tools when these emerge in educational contexts “uncontrolled” directly by the educator. In this sense, lecturers give in the supervision of what is happening in the training context, thus giving rise to some gaps on who must validate or accredit the acquired learning, partially or completely generated from the learning group.

Another aspect to be questioned is related to who chooses prescriptive learning issues. Up to date, in higher and postgraduate education, a set of academicians and teaching professionals choose, validate, and argue the suitability of the contents which must be tackled to guarantee appropriate development of a given profession, being updated. The entry of 2.0 tools means reconsideration: we go from “what must be known, know how to do and be” (and a specific way of bringing order to the contents – “granularity,” Weller & Dalziel, 2007) to “what the individual-group is interested in learning in a given moment.” Logically, there is a complete level of adaptation to the needs and expectations of the group, since the latter names and guides the contents that are the learning base. The question is: are these needs and expectations basic and essential to accredit the knowledge that an individual must acquire for his/her professional practice?

Finally, the training institution must be analyzed as the higher body that hosts these teaching–learning processes. We can here question the role this institution and teaching professionals must play in the control of generated contents:

- **On one hand, their role regarding intellectual property.** In a free-software and joint-creation context, hindering and hampering socially generated knowledge seems rather illogical. Nevertheless, it does also seem illogical that the information generated in a training environment by a group does not dispose of the minimum coverage to guarantee protection against third parties obtaining non-consented benefit, specially in a moment when ideas and products have high market value and many of them are zealously protected by corporations and research institutions.

- **On the other hand, the role of validating group-generated contents those impose.** Training institutions must accredit and therefore approve the capabilities of an individual after the completion of a training process, among other duties. Thus, it should not be forgotten that the information generated in a training program is stamped by the institution that supports it, and therefore goes beyond the training space through didactic materials, learning activities, etc. In this sense, a space of debate necessarily opens on the validation process of the knowledge generated by means of 2.0 tools, and therefore on the borders of the own training program. “Truth” – which has traditionally been an unequivocal value – now becomes “truths” (Weinberger, 2007). This change entails certain complications when we deal with regulated training, which should approve students’ learning.
Finally, as an innate trend in 2.0 tools up to date, contents are now more perishable than ever. Expiration dates and temporariness get mixed up. The trainer is given by the current knowledge society as knowledge is built up “on time.” Essentially, this means that both teaching professionals and students are updated. Updating demands certain values such as effort, responsibility or personal interest, and motivation. The latter can seem more worrying, since the “permanent beta thought” (O’Reilly, 2005; Pardo, 2009) appears: always under construction, provisional, alert to discriminate between information and knowledge, on one hand, and noise on the other.

Undoubtedly, “outside” values and preferences directly influence (and decide on) the conceptualization, development, and production of contents at the heart of training institutions.

**Another edge to file: evaluation processes in distributed learning**

We cannot forget that evaluation is one of the key axes in the teaching–learning process in higher and postgraduate education. They constitute the main way through which the institution argues and accredits what students have learnt, and has traditionally been a teacher-mediated issue. In this sense, according to the objectives, the competencies to be developed and the general methodology to be applied, teaching professionals elaborate the set of instruments and activities that will enable reaching them.

The entry of 2.0 tools into the training field obviously does not only introduce new variables regarding the role of the participants to the teaching methodology or the production of contents, but evaluation is also another essential issue for reflection. 2.0 tools allow learning processes to take place in different times and spaces, thus being constructed individually and in social contexts, and take place in formats characterized by informal learning (conversations, short interchanges, debates, quick discussions, consultation to multiple sources, etc.). New, less academic, more direct languages are also introduced. These languages are singularized by “outside” features from the market, the everyday practice, etc. Learning by means of 2.0 tools takes place in the interaction in a non-space or multi-space created constantly between the individual and the group, in the limit between personal opinions and the contrast with those of others.

It no longer makes sense focusing evaluation only on the result, let’s say the output handled the last course day as the end of the work. Evaluation is, therefore, applied to an issue that is constantly growing, changing, and transforming, and factors such as feedback or interactivity get an outstanding role in evaluation. Lecturers will have to prioritize the process. Therefore, they will need to create new assessment instruments and tools.

In this context, it seems rather logical that lecturers must incorporate peer and intergroup evaluation more intensively, as well as promotes the evaluation of the competencies of these new spaces of interaction and social construction of knowledge (arguing capacities, justification, contrast and validation, critical awareness, collaboration, interchange, etc.). This evaluation should also consider different depth and quality levels, so that it seems that the signature evaluation will play a more relevant role in the general assessment of learning advances. In the fields of regulated education, what new values will then be evaluated?
This introduces ethical questions related to the teaching professionals. These questions can be articulated in the following way: if the “process” becomes one of the key aspects in evaluation, this probably entails visualizing what is happening at the heart of the group at all times, but to what extent will lecturers be able to take part in this group process? To what extent will students consider their working procedure as keeping an eye on them? Will this lead to a more continuous creation of alternative communicative spaces among students so as to escape from this supervision? Will then actual learning processes take place in these other alternative group spaces?

Decisions to be made: dealing with 2.0 tools at institutional level

After the presentation of all these evidences and doubts, there is still a question to deal with. If the values, expectations, and criteria from “outside” through 2.0 tools involve certain revisions in several of the intrinsic focuses of all training processes developed in higher education institutions, must there be a strategic positioning at institutional level to boost the entry of this culture, with all the changes it entails? Beyond economic, ideological, or production issues – from our viewpoint – these are the basic aspects which directly influence the teaching–learning process.

Firstly, it can be said that this promotion, in times of full spread of 2.0 tools, seems advanced, on one hand, and risky, on the other. In spite of the applications, good practices and studies that are now beginning to emerge in this field, 2.0 tools are still a turning point in a somewhat unexplored land within the educational sphere, although they have had wide social acceptance. It has already happened; this will not be the last. Education is effectively a highly sensitive field to technological innovation, receiving both its positive and negative influence.

In any case, it seems rather clear that training institutions must visualize the role 2.0 tools will be given within a relatively short-term period, since “outside” demand is pushing hard. This means processing the potentialities, risks, benefits, and opportunities these tools involve to train and teach skilled professionals in a market in which competences associated to 2.0 tools are highly valued.

Any institutional position also entails the validation of different examples in which the application of 2.0 tools has lead to an important qualitative improvement regarding content generation, teaching methodologies, evaluation, etc. Higher education institutions must research on their use in ongoing training programs and progressively configure a bank of good practices applicable to other training contexts. Beyond the creation of recipes automatically transferable to any other reality, it is about articulating basic principles that may be adapted according to the needs of each course.

At the same time, it demands consensus on aspects related to the pedagogical function of these institutions. That is, looking for agreements on the typology, use, and value that 2.0 tools will have in the whole teaching–learning process, and how they can influence certain issues such as contents, methodology, evaluation, or the panel to be developed by both lecturers and students. Obviously, reaching this consensus will not be an easy task, given the values at stake.

Another important aspect is related to the creation of an open and positive attitude by teaching professionals regarding the use of 2.0 tools within the framework of the different training programs. These tools cannot be stated to have massively entered the teaching–learning processes in higher education
institutions and, therefore, many of them are still spread through master lessons, written exams, reading of digital documents, etc. These practices are part of the structure of the Academy and are routines set in its everyday activity. The entry of 2.0 tools is understood not to break with everything developed so far but to open new ways to learn and teach. Obviously, teaching professionals’ resistances and obstacles have a huge weight in institutions’ decision-making processes. Without their active collaboration this proposal may enter a dead end street (those margined by social processes and the market).

Students also play an important role. That is, apart from teaching professionals’ promotion and encouragement of the use of 2.0 tools, and the creation of open spaces for participation, we understand that students must contribute a new mood to their learning processes. Apart from certain essential values such as immediacy, personal and group interest, timelessness, etc. which characterize 2.0 tools – those of collaboration, commitment, predisposition, critical awareness, honesty, etc. must also be added in a formative context. As Simões and Borges (2008) argue, the peer-pressure to enhance performance and participate in collective activities is a factor that promotes the building of ethical relationships between students. This profile obviously adapts more appropriately to what higher and postgraduate education should be.

Conclusions
Higher training institutions face a crossroad ahead, a turning point in which they must know how to balance and promote, from the Academy’s structural trend, unidirectional and transmitting learning to the 2.0 juggernaut, in which participation, multidirectionality, and distributed learning are the most outstanding aspects. Against resistances and reticence, multiple new possibilities and opportunities arise, while higher training institutions face the challenge of visualizing and drawing the plan to follow. As Walton et al. (2008) indicate, the use of web 2.0 mean that “the emergent changes in the environment in which higher education operates present significant challenges to the hierarchical and ‘producer-led’ drivers underlying higher education.”

In short, we understand that resistance and reticence at institutional level to these new values and expectations contributed by 2.0 tools must be carefully dealt with. This task demands:

– Creating a multidirectional channel among different professionals to comprise the whole relevant information for training institutions and professionals.
– Aligning training with the institution’s strategic challenges and the values it desires to contribute to training processes.
– Establishing a space for the interchange of good practices among the members of the same training community.
– Increasing the motivation of training technicians with valuable solutions aimed at professionalizing and involving both students and teaching professionals.
– Collaborating to reinforce group identity, thus creating a sense of belonging.

Most of these proposals necessarily imply high hierarchy of the institutions to promote cultural changes and to implement values such as peer collaboration and open participation between the whole educational community.
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