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A PEDAGOGICAL MODEL TO DECONSTRUCT MOVING PICTURES IN VIRTUAL LEARNING ENVIRONMENTS AND ITS IMPACT ON THE SELF-CONCEPT OF POSTGRADUATE STUDENTS

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The vertiginous evolution of information and communication technologies (ICT) and the advent of the Internet propitiated the emergence of a networked society marked by deep changes in the economy, stimulating the emergence of new paradigms, models, educational communication processes and new learning scenarios. It is precisely one of these models – *a pedagogical model to deconstruct moving pictures* –, that we intend to analyze, describing its impact on the academic self-concept of twenty-four graduate students, based on the qualitative analysis of their own perceptions and narratives. The results show that these pedagogical model environments – whose design is anchored in the principles of socio-constructivism, collaborative learning, autonomy, flexibility and interaction – may have very positive effects on the academic self-concept of higher education students in the various dimensions taken into consideration: Motivation, task Orientation, Confidence in their own capacities and Relationship with colleagues. The implications of the

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results are discussed not only from a practical intervention point of view, but also in terms of future research.

1 Introduction

The changes introduced into the teaching and learning processes through "new" resources that have appeared and through several technology-supported forms of informing and communicating contents require that we situate the pedagogical guidelines according to a school organizational model adapted to suit new possibilities.

With *Web 2.0* and *Pedagogia 2.0,* the focus has been very much on network-based learning and on the potential of the so-called social software to access information and knowledge (Lee & McLoughlin, 2007). Today, learning in more "breathable" spaces without barriers or physical or virtual walls, such as social networks, is a huge challenge to digital societies in that these environments bring us to the emerging paradigm of *Open Education.*

Network collaborative *Open Learning* has been considered an important educational philosophy to enrich lifelong learning by providing opportunities for access and construction of knowledge through networks (Okada, 2014).

Most schools are aware of this reality and have come up with many reforming initiatives, including the introduction of digital technologies and platforms to support the process of conveying their strategic plans. Despite the major investment in ICTs in Portugal, however, the potential of these platforms and interfaces has been underutilised, mostly due to the lack of teacher training and to the fact that intentions and training needs between teachers and training schools do not always tally with one another (Moreira & Monteiro, 2010).

Whereas an approach focused on digital literacy was initially proposed as a first step towards drawing teachers to the new online environments that facilitate their job, today, as thoughts about the digital society have matured and been reflected on, it is obvious that this approach is clearly not enough and should be replaced with one that encourages pedagogy and technology to merge and promote the development of *multiliteracies* on the premise that we have to give yet more consideration to the multiple communication channels that generate diverse forms of communication. In this regard, Amasha (2012) points out that considering a pedagogical methodology through the development of *multiliteracies* will enable individuals to analyse multimodal texts in more depth and more accurately, and also to produce new textual approaches.

The main future skills include the ability to develop new forms of using audiovisual resources to improve the learning environment, and for that reason it is extremely important for the school to develop an aesthetic eductation to understand visual culture, capable of educating the eye and of enabling the

emancipation of the individual (Hernandez, 2000).

At the heart of this issue lies the question of how teachers see this resource, how they are able to integrate it in a timely manner in a number of other strategies and educational resources, and how they use it to address the topic itself (Ferrés, 1996; Moran, 2002).

To include a film in a learning activity can actually be a very appropriate strategy to stimulate the educational experience, because as Fresquet (2013) states, when education is partnered with the cinema it tends to be inspired, leading to educational practices that recover the magic of what it means to learn.

In this educational context of changes, academic self-concept appears as a key commitment and as a core construct, as a dimension that promotes and facilitates learning.

Academic self-concept refers to the image that a person develops and has of himself as someone involved in a specific school and learning process. Teachers can influence how this self-concept evolves, as they communicate their expectations of students' performance and can influence students in a positive or negative way. In addition to this influence, peer relations are also important, since the student's self-concept is shaped through an interpersonal comparison process (Urhahne *et al.*, 2011).

The purpose of our work is, therefore, to analyse a pedagogical model for the design of *e-tivities*, focused on the "deconstruction" of moving images and their impact on the academic self-concept of post-graduate students, in terms of motivation, task orientation, confidence in their own capacities, and relationship with colleagues.

In short, our research aims to look at possible scenarios and alternative learning designs in the field of higher education pedagogy, studying the effect of this model on the students' academic self-concept, in particular as regards motivation, task orientation, confidence in their own capacities, relationship with colleagues, and also to explore and deepen knowledge, which is reflected in the expected results.

2 The virtual pedagogical model. Lines of strength, principles and phases of an e-activity based on the model

With the aim of defining a pedagogical model as a construction that seeks to represent a view of learning, and recognising the need to define educational procedures and a reference framework, we present below the lines of strength and the theoretical principles of the model created for the design of *e-tivities* centered around the "deconstruction" of moving images, rooted particularly in a humanist, socioconstructivist and collaborative pedagogical philosophy,

and based on the theoretical principles of the Theory of Cognitive Flexibility (Spiro *et al.,* 1987).

Constructivist, Collaborative Learning based on Communities of Research. The model, as also argued by Garrison and Anderson (2005), is grounded on the concept of research community.

Interaction-based Learning. Interaction is assumed as a principle underlying the pedagogical process in the context of this model, both between student-teacher, student-student, and between the student and the contents and digital tools of the social web.

- *Flexibility-based Learning.* Flexible and "extensible" access to contents and activities, with no imperatives of time or travel, according to the sutdent's availability.
- *Learning as a facilitator of multiliteracies.* Multiliteracy is understood as the need for students to develop new discourse analysis skills, to the extent that they are able to transmit and represent their world through models or new multimodal formats (Faria, 2016).
- *Educational Experience of a Humanist Nature.* On the one hand, students, as active individuals, builders of their own knowledge, engaged and committed to their learning process and integrated in a community, take on the role of central element in the educational process; on the other hand, the teacher acts as a core element, as an e-moderator (Salmon, 2000), having to lead that educational experience, accompany, motivate, dialogue, be a leader and a mediator, encouraging and mediating a positive human interaction.
- *Educational experience based on the Theory of Cognitive Flexibility.* This theory, developed by Rand Spiro and collaborators (Spiro *et al.,* 1987) to solve the difficulties in transferring knowledge to new situations, focuses on cases analysed or deconstructed according to multiple perspectives or themes, which can also be divided into small units, the mini-cases.

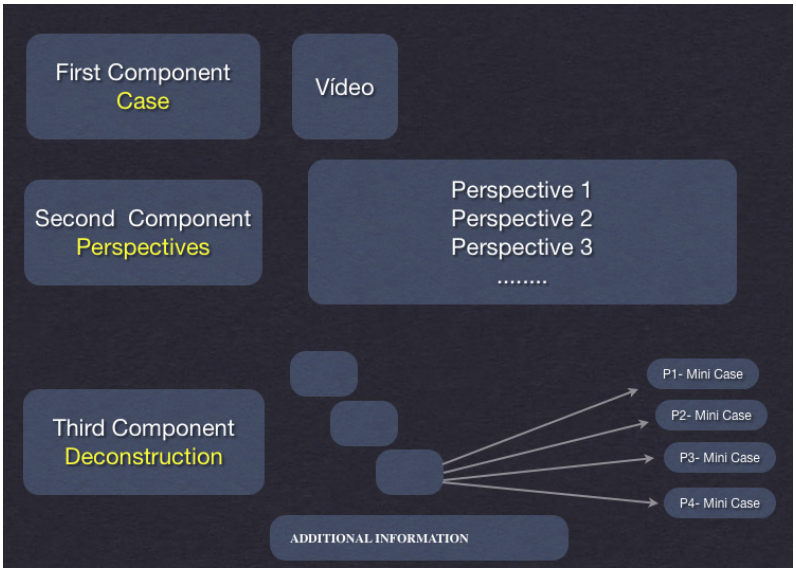

Fig. 1- Pedagogical model for deconstructing moving pictures in virtual learning environments (Source: Prepared by the author)

A learning material structured according to this model thus consists of three components: the case (for e.g., a film sequence), the different perspectives, and the deconstruction process.

The case must be fully available so that the student can understand it before the analysis process begins. The perspectives offer the conceptual framework of the deconstruction analysis of the moving pictures. It is vital that students understand the underlying references given to each perspective by the teacher, a perspective understood as intended to mean a theory, a concept that the teacher feels is relevant for deconstructing the case. Deconstruction is the essence of learning. The case is split up into smaller units of analysis, the mini-cases, through the deconstruction process, and for each mini-case there will be an explanation on how this perspective is present in the mini-case. Where necessary, additional information may be given to help understand the mini-case, giving the student a deeper learning. Students may also refer to the bibliographical references related to perspectives. Some of the main advantages of the model are the use of a learning theory that provides a coherent pedagogical basis, the development of the students' cognitive flexibility, and the incentive to analytical practice. This model requires students to participate actively in the learning process, and provides an in-depth analysis through the deconstruction of the moving pictures, which will ensure an increase of the

cognitive flexibility through the various examples deconstructed, followed by a series of questions that make students mentally criss-cross the deconstructed mini-cases. This participation obviously requires reflection, maturity of knowledge, and cognitive flexibility.

In light of the theoretical assumptions of this model, we now list the main phases of an e-activity focused on a video to be developed in an online environment. Note that the four phases of this e-activity are used as an example only, and may be adapted according to the environment, space and time available for each e-activity.

The first phase is called *Preparation* or *Planning* and refers to the video preview step. The teacher must first choose and view the video to make sure that it suitable for the purpose(s) of the lesson(s) and its recipients. Then the teacher must prepare the activities to be developed and design the teaching support materials to be used in subsequent phases. These materials must include a reading script for a comprehensive and functional initial understanding of the video, and an observation grid provided to the learners before they view the video in the learning management system.

This grid may be designed according to a specific video (an interview, a documentary, a fiction film, etc.), or be adapted to most videos, with a section for a comprehensive reading (*positive aspects, negative aspects, main ideas*, etc.), another section for a more focused reading (*description of contents and situations; reconstructing the theme, the story*), and a section for functional reading (*keywords*).

Before the second phase begins, the teacher must explain how the students can get hold of the video, that is, they may need to buy it or view it on the learning management system.

The second phase is called *Viewing, Reading and Analysis of the Learning Object* and refers to the actual viewing of the video. In this phase, the teacher must provide students with the educational support materials prepared in the first phase – script and observation grid -, which should encourage them to actively view the video and assess the concepts. As, in principle, each student will view the video by themselves, the teacher may also suggest that they view it more than once: the first time will give them an overview, followed by partial views, pausing at times, for a more focused and detailed analysis. We believe that one week is enough for this second phase.

The third phase is streamlined online by the teacher and is called *Deconstructing the Learning Object, Discussion and Reflection.* This is the phase in which the teacher provides the virtual classroom and presents the theoretical references needed to deconstruct the learning object. Students are called to discuss these references, presenting their thoughts about the video

they have seen. This deconstruction and the subsequent discussion are the essence of learning, because they enable the video to be broken into smaller units of analysis, the video extracts, which are then discussed according to the knowledge of each student, to the information from their observation grids, and to the bibliography consulted. Whenever the teacher finds it appropriate, he or she can and should give additional information, thus providing students with further knowledge on the theme.

Although we feel that one week is enough for developing this phase, we could also consider weekly cycles as the deconstruction may trigger new and more refined viewing sequences structured according to the goals defined, and could therefore be extended on a cyclic basis.

The fourth and final phase is called *Conclusion and Verification* and refers to the final summary of the activity, where the teacher can ask the students to use the knowledge acquired in order to be assessed. At this stage, the teacher can suggest additional literature, other videos on the same themes, search sites, or other complementary activities.

3 Methodology

Due to the nature of the analysis, we felt it was relevant to use the *Design Based Research* (DBR) approach, which is based on the *design experiments* concept. According to Wang and Hannafin (2005), this research method in education is intended for a thorough and reflective research and to test and improve innovative learning environments. It also seeks to conduct research work on educational problems in real pedagogical contexts, aiming to solve substantial and practical problems, combining theory and practice by linking the collaboration between researchers and professionals and looking to understand, document, interpret and improve the education practice.

The sample consisted of a group of 24 post-graduate students of the Open University, Portugal. Information was collected through a survey questionnaire and a research technique capable of decoding the semi-free and apparently mixed statements was used to analyse the data therefrom: content analysis (Bardin, 1977). Taking account of the scope and purpose of the study, and the documentary analysis of some regulations in the context under study, we drew our inspiration from the *Self Concept as a Learner Scale* (SCAL) developed by Waetjen in 1972, later adapted by Veiga (1996) to the portuguese population, to build our instrument, using the four components of the SCAL. The first one – *Motivation* – refers to the perceptions that students have of themselves, as to their taste and interest in e-activities and the virtual pedagogical model; the second one – *Task Orientation* – assesses the care with which students carry out the e-activities in the virtual environment, and refers essentially to the effort

in doing the specified activities well; the third one – *Confidence in their own Capacities* – assesses the confidence that students have in their ability to do the online activities; and the fourth one – *Relationship with Colleagues* – refers to their integration in the virtual learning community and their perception of confidence received from the community. Based on these categories, we defined a number of open questions that have shaped the survey.

4 Presentation and discussion of results

The information obtained from the questionnaires will be presented in tables to show the relevance of some of the students' opinions. These tables contain the codes of the respondent's (E) number (N), the record number, and the record with the extract of the respondent's opinion.

In the first category, *Motivation*, with twenty-four records on the perception that students have of themselves, their taste for and interest in e-activities and in the related pedagogical model, the classification of records shows only positive responses. In other words, all students consider that the e-activities and the model centered on the deconstruction of moving images are very motivating.

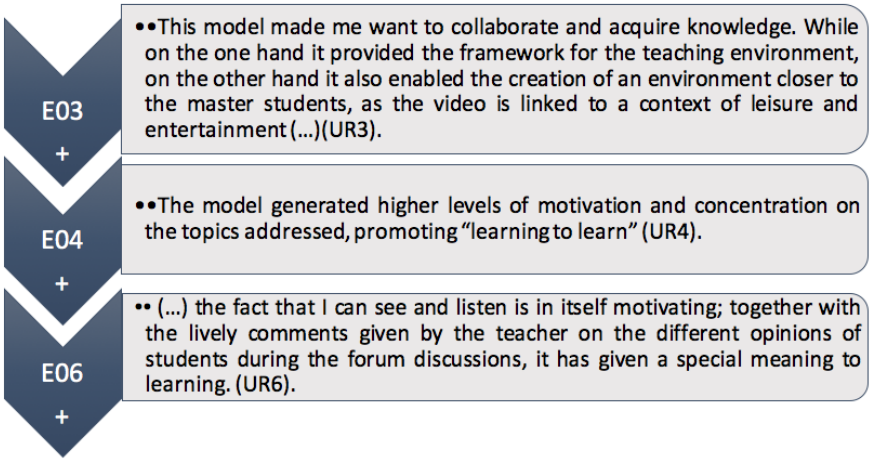

Fig. 2- Motivation (Source: Prepared by the author)

As we can see in the first record, student –E3- refers that the model has led to the buildup of collaborative learning, enabling the student to build its own knowledge within a visual learning community.

Student -E4-, as we can see in the second record (UR4), found that the model and the careful use of images was very motivating, promoting the idea

of "learning to learn".

One of the characteristics of this model is that it encourages reflection and critical discourse, the development of individual and social responsibility, and promotes a critical and creative spirit. However, to become self-sustainable, the model needs what Garrison, Anderson and Archer called presences: *Cognitive Presence*, *Social Presence* and *Teacher* or *Teaching Presence* (2000). These elements and how they relate to each other are crucial to the success of educational experiences.

Student–E6-, shown in the third record (UR6), found that this model was very motivating, because the teacher's effort put into the pedagogical deconstruction of the films being analysed made learning very significant.

The teacher's approach and educational performance proves to be extremely important, as it allows students to have an active participation while they build their own knowledge (Moreira & Monteiro, 2010).

As regards the second category, *Task Orientation,* also with twenty-four records, the classification of records shows a very high number of positive statements (twenty-one), clearly showing that the students feel that they have managed to organize themselves and have managed the model's e-activities well.

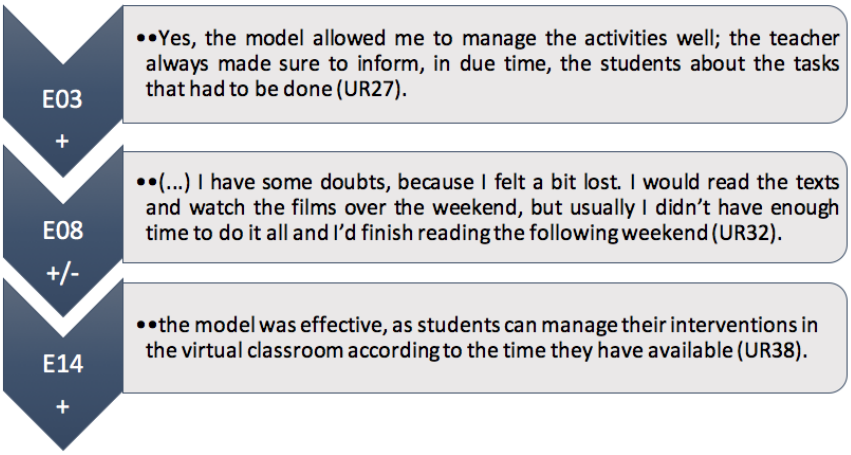

Fig. 3- Task Orientation (Source: Prepared by the author)

As we can see from the record above, student -E3- found the model to be a facilitator of learning, because it allowed him to effectively organize the tasks and teaching activities.

Most of the statements collected point to the benefits of time and space

management when performing the e-tasks, for example:

E4- "this course unit presented an effective pedagogical model that allowed me to manage the activities according to the time I had available for studying" (UR28).

However, as we can see in the second record, student –E8- says that she felt a bit lost because she didn't have much time for the activities she had to do, which is not because of the model's limitations, but rather due to her own personal and professional limitations.

The records of the third category – *Confidence in their own Capacities* – fall into the following classifications: *Confident* (+) and *Slightly confident or Not confident at all* (-). The first one, *Confident* was checked the most, with twenty-two records, suggesting that this pedagogical model made the majority of students feel more confident about their capacities; on the other hand, the records for the second one, *Slightly confident or Not confident at all,* show that the model has done nothing to increase the students' confidence in their capacities.

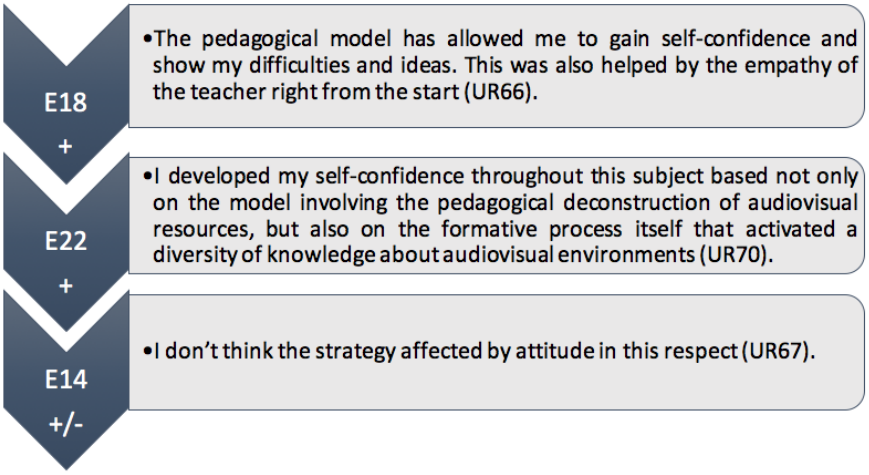

Fig. 4- Confidence in their own Capacities (Source: Prepared by the author)

As we can in the two first records, students -E18- and -E22- refer that the model has allowed them to gain self-confidence, show their ideas in virtual classrooms without any fears or concerns, where the weight of hierarchy and power is felt less.

The statements of other students are similar:

E3- "In this respect, I would like to emphasize the feedback and positive reinforcement of the teacher who assured the students, encouraging them to

continue even when they hesitated (...)" (UR51)

E10- "The teacher gave each one of us autonomy, no "judgements" made, enabling us to express what we felt without any 'fear'" (UR58)

Note, however, that the perceptions of students are not unanimous; for instance, as can be seen in the third record in the previous table, student -E19- says that its confidence levels have not changed.

Finally, in the third category, *Relationship with Colleagues*, the records fall into the following classifications: *The Relationship is Stengthened* (+) and *The Relationship is Identical* (-). There are twenty-two records for the first one – *The Relationship is Stengthened* –, which clearly suggests that the design of the activities and the model have strengthened the social bonds between the class members, forming a tight virtual learning community.

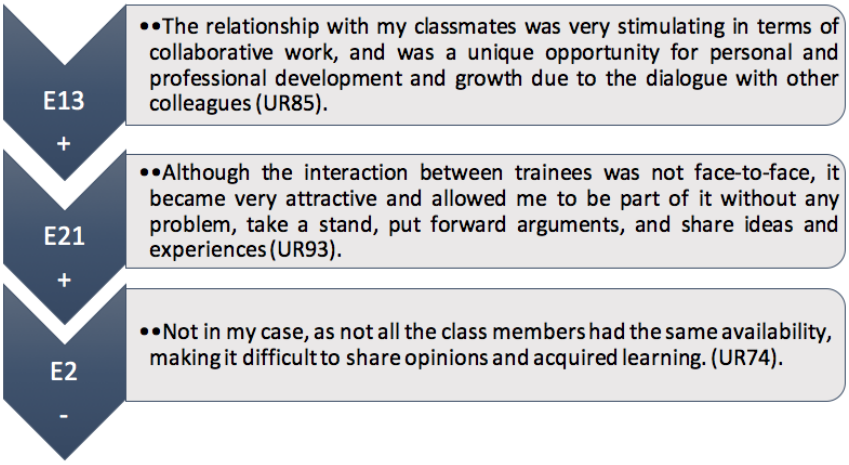

Fig. 5- Relationship with Colleagues (Source: Prepared by the author)

As we can see in the first two records, students -E13- and -E21- mentions that the model has enabled the building of good relations with colleagues and fostered the creation of a solid virtual community of learning. Other students stressed the same ideas, adding that:

E22- "What seemed to be "confusing" at first, before I was part of the virtual community, later became a challenge. I became properly integrated in the virtual community" (UR94)

However, note that although this statement does not indicate that there is a bad relationship, student -E9- says, as we can see in the second record, that the environment has not led to significant changes in the relationship with her colleagues.

Indeed, another potential of this pedagogical model is the interactivity and interacton that can be established between the various participants. During this interaction, the teacher is responsible for identifying the relevant knowledge, for proposing experiences that lead to critical discourse and reflection, and for diagnosing and assessing the learning results, noting that e-learning demands greater attention to the balance between control and responsibility (Garrison & Anderson, 2005). The interactions not only with the teacher but also with fellow students are, therefore, the practical basis of learning in these online environments, and are substantiated by constructivist and sociointeractionist theories, as mentioned previously, as they require the negotiation of conflicts and sharing of meanings.

Conclusions

Some studies have in fact found that the use of video in online environments has very positive effects on the academic achievement of higher education students (Bridge, Jackson & Robinson, 2009; Baran *et al.,* 2010). Taking into account the perceptions of the students involved, the results of our study show that the pedagogical model tested can indeed have a very positive effect on the academic self-concept of higher education students, as regards the various components considered, in terms of both their motivation, confidence in their own capacities, the organization of activities and the relationship with their colleagues.

We concluded that the students felt that the pedagogical model underlying the educational activities was a decisive motivational factor for their academic performance. By highlighting the continued presence of the teacher in the different communication spaces in the virtual environment and its different roles (motivator, mediator, moderator...), the social interaction between students and teacher and between colleagues, and by recognizing that this space generated stimulating discussions and cognitive conflicts, the students indirectly showed that the virtual pedagogical model helped create a learning community that motivated them to the academic activities of the subject.

We have also concluded that the students feel they have made an effort to complete the tasks asked by the teacher and that the pedagogical strategy used can facilitate the organization and management of their time spent in doing the academic activities.

With regard to the issue of confidence in their own capacities, we have concluded that the model has made most of these students more confident in their capacities, with the virtual classrooms created in different online spaces of the social web significantly contributing to the achievement of that confidence. Although they are not intended to or able to predict and exhaust

all technological possibilities in education, digital environments uch as *LMS* and social networks can, today, be combined in the pedagogical process in a format which we call *blended (e)learning.* Through their own collaborative interactive platforms or integrated in online learning environments, *web* 2.0 tools can provide spaces and technical means for the development of learning communities, since they are versatile, easy to use, and offer numerous ways of communication, sharing and collaboration.

Finally, in relation to colleagues, we can conclude that this model has enabled the strengthening of social ties between students, thus forming a "coherent" virtual learning community.

The various environments created on the social web with *Web 2.0* tools had a vital role to play in the creation of this community of practice. They were envisaged in the model for the pedagogical deconstruction of audiovisual resources, allowing various levels of interaction: one-to-one up to many-to-many. Moreover, interactions not only with the teacher but also with fellow students are the practical basis of learning, and those interactions were supported by constructivist and sociointeractionist theories.

Our study has also demonstrated the social side of the human being and its repercussions in the academic self-concept of higher education students.

Regardless of how effective these strategies or the proposed model may be, we believe that it is always worth looking for new routes to integration: the human and technological factor; the face-to-face and the virtual factor...

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