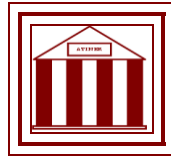


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**The E-Activities to Support the  
Process of Teaching and Learning in  
Online Context**

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## **The E-Activities to Support the Process of Teaching and Learning in Online Context**

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### **Abstract**

E-activity is the term that is usually applied to the structure for an active and interactive online training. E-activities can be used in many ways, but have some common characteristics.

Our main goal is to present the work in the creation and development of a learning module about e-activities. Throughout our work we will present the methodological options that were behind this structure taking into account, on the one hand, the content to display. On the other, the way they do and the reasons that led us to adopt that model.

**Keywords:** Online education, e-activities, self-regulated learning, learning styles.

## **Introduction**

The development and use of the Internet in education provoked changes in attitudes towards teaching and learning processes, and the role of their agents – e- teachers and e-students, as well as the interaction between them and the learning content. This designation entails changes not only in nomenclature but in particular in the structure of the learning process, and also in what is expected of each of the agents involved. In any process of education, activities are a key element as mediators of the teaching-learning process. They can take different styles and meet different objectives depending on the competencies aimed to be achieved. In the context of teaching and learning networking, e-activities play a no less important role. Learning in digital environments allows the use of resources and tools that enable interaction and networked, collaborative learning. In these learning contexts, e-activities allow meeting the student's needs, in a more independent action or in joint and group actions. This may change a more passive posture to a more active and constructivist attitude from the student.

## **The Online Context**

The internet is, nowadays, a huge information repository that we can access according with our own needs regarding time, context and individual characteristics. The concept of classroom is wider and its boundaries are more tenuous.

In this context, we've been increasingly disseminating online learning with all the challenges related to this type of process.

Through it we pretend to create environments supported by information and communication technologies and their main goal is to create knowledge without space or time constraints and using strategies that allow creating a real network of knowledge and interaction. The interaction exists on a double level – with the knowledge and amongst people.

Online distance education is a social process that facilitates the collaboration and interaction between people and contents and implies change on the different agents of the process – organization, teachers and learners.

Concerning the organizational level, it's necessary to be able to change and to be prepared for the consequent adaptation to a different teaching-learning process. This adjustment shouldn't just be seen in a technological point of view, but also in a mentality and posture one. This reality implies a significant cultural shift, since it demands to rethink the teacher and learner roles, their relationship and the adequacy of the contents, besides the implications on the structural level and on the planification of the courses and curriculums, evaluation systems, ways of teach and learn, goals to achieve, amongst others. Concerning the teacher level, as mentioned previously, the changes are visible in their placement in the whole process. New requirements

and responsibilities are given to the teacher. Therefore, more than convey knowledge, the teacher should guide the students' in the learning process, in a way that develops their capacities, namely learn how to learn, self-learning and autonomy. For this to be achieved, the teacher has to plan and structure the education process in a flexible and open way, that allows for different approaches, where didactic, motivating, dynamic and current resources are included, using an interactive methodology, resorting to several communication channels to serve their teaching methods. Being a teacher in an online distance learning setting is not only a question of being knowledgeable in a specific scientific content but also involves a change in attitude regarding the teaching-learning process. The teacher should monitor, motivate, dialogue, be a leader, incentivizing and mediating a positive human interaction.

Concerning the learner, this system allows to answer with greater efficacy the specific characteristics of a student, namely, their learning style. This implies a formal structuration of the virtual space regarding the type of learning tools, as well as the activities available. These should be diverse in order to target different styles of learning.

The Online distance education leads to the learner becoming a more active element of the process leading to the construction of knowledge. It's hoped that the student's take the initiative to learn and interact with each other. The work from Azevedo & Cromley (2004) highlights the implications that the design in virtual learning settings have for the gain of knowledge.

There are varied options regarding the models and methodologies to follow, given the goals to achieve. It's possible to find more factual models, where the focus is *e-reading* or online courses where the *learning by doing* is the primary target. Between these two extremes, it exists a vast number of other possibilities on offer. We are here referring to learning scenarios where a greater flexibility is valued, aiming for a higher efficacy and resource saving.

The Online distance education has a specific group of principles. Amongst those, we highlight the multiplicity of contexts where interactions occur and the teaching-learning processes are developed. This multiplicity can be seen in a geographical matter, but also in a cultural one. The interactions in which these contexts are developed (amongst peers, between teacher-student and between them and the contents) are essential elements to the construction of knowledge. The teacher becomes a mediator of learning, guiding the student's throughout the process. In this scenario, e-activities are presented as the pivot, structuring the whole process.

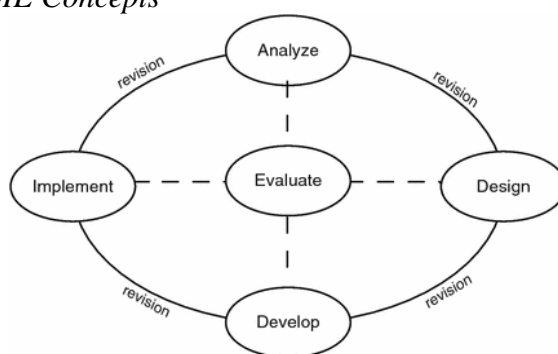
Its conception and organization defines a pedagogic proposal, aiming to help achieve proposed tasks and accomplish the implied contents, leading to actual learning.

The technology is not simply a tool for transmitting contents. Its incorporation in learning settings led to a transformation in pedagogy; in the way interactions are made and, therefore, in the way teaching and learning are processed on online distance education contexts. The introduction of these technologies, *per se*, is not enough to guarantee that information becomes

knowledge. It is necessary a whole design of the process and how, when and which means or techniques will be included.

The design of e-activities is assumed as an essential element regarding the instructional design. E-activities have an important role concerning how to select and organize resources, as well as the more appropriate paths to promote learning. It is, therefore, necessary to conceive these scenarios given the goals to achieve, how and when they're going to be developed and follow-up the students' pathway, given the constructive principles, aiming to strengthen significant learning. The model ADDIE (Branch, 2010), of the instructional design, involves five phases (*Analyze, Design, Develop, Implement and Evaluate*) as described in Figure 1.

**Figure 1.** *The ADDIE Concepts*

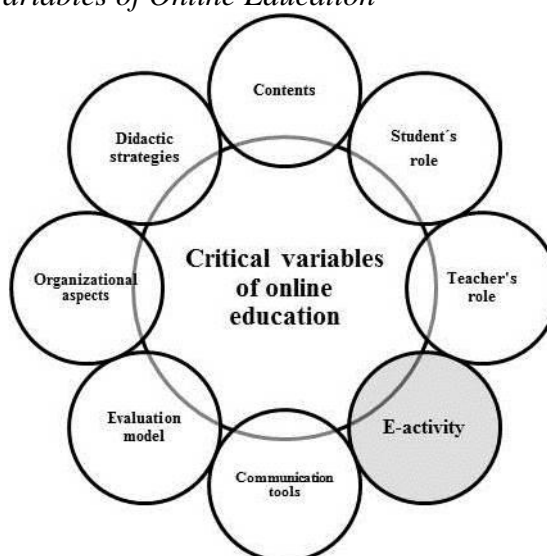


Source: Branch, 2010, p.2

This design of the process cannot be seen in a closed way. Accounting for the importance of flexibility, it should allow for changes and adjustments, in order to adapt to the needs and conditions of the course and the students.

The online distance education contexts provide methodologies focused on socio-constructivism, centered in the student, with an active nature, dynamic and participative (Salinas, 2008; Goulão, 2012<sup>a</sup>). This proposal leads to changes on the conceptual level, on the ways of communicating and interacting; on the resources to incorporate and on the roles of teachers and students. According with Cabrero and Román (2006) the success of courses in online contexts is based on eight critical variables, as described in Figure 2.

**Figure 2.** *Critical Variables of Online Education*



Amongst these critical variables, we find the e-activities that, as described previously, have a mediating role between the learning goals and the learner, in order for them to access contents and incorporate in their knowledge structures.

But what are e-activities? What characteristics can we find? What functions do they perform in the teaching-learning process? How can they be created? The next section will describe these aspects and highlight their importance in the online distance education contexts.

## **The E-Activities**

### *Characteristics and Functions*

The e-activities, activities performed in online distance education contexts, are actions performed by the students to achieve certain goals throughout the learning process (Cabreo and Román, 2006; Meneses, Fernández and Regaña, 2006). The e-activities can be used in several ways, but have some characteristics in common. To create these type of activities, teachers should account for:

- What the students are expected to learn from the activity,
- How is that learning going to contribute to achieve the goals of the course/topic/theme.
- The students and what motivates them. The activities should be conceived with the goal of developing the student as whole, leading to their development and to strengthen their competencies,
- The limitations occurring from the course and the students' use of technology.

In this didactic, socio-constructive point of view, e-activities should, on the one hand, demand the participation of students, their experience (previous knowledge) and their autonomous construction of knowledge. On the other hand, they should promote different types of interactions. Through the e-activities, diverse competences are tested whether at the individual level or at the collaborative level (Barbera, 2003). As it is recommended in a socio-constructive perspective, by Vygotsky, the social context and interactions with the environment are essential elements for the individual construction of knowledge.

The flexibility of choosing resources provided by the online context, creates an increase in the possibility of learning pathways that should agree not only with the goals, the tasks, but also with the different learning styles of the students (Martínez and Pérez, 2011; Goulão, 2012<sup>b</sup>).

Therefore, e-activities should be conceived and developed in order to guarantee the motivation of the student and, at the same time, be oriented to the attainment of goals. According with Salmon (2002) *The whole e-tivity process should be geared towards engaging participants in active online learning that results in their achieving the outcomes that they and you desire.* (page 87).

Amongst these examples, we can name “ice-breaking” or online socializing activities that allow students to introduce themselves or speak about their motivation and expectations for a module or course; in a construction of knowledge level, web site consultation, case studies, the constructions and use of wikis, conceptual maps, webquest or weblogs, simulations, role play, amongst others.

Figure 3 synthesizes the main characteristics to take into account when designing an e-activity. These aspects will be developed in section 3.2. on this paper.

**Figure 3.** *Principles for Designing E-Activities*

|  |                   |                           |
|--|-------------------|---------------------------|
| <b>Principles<br/>for designing<br/>e-activities</b> | <b>Stimulate</b>  | <b><i>Autonomy</i></b>    |
|  | <b>Propitiate</b> | <b><i>Interaction</i></b> |
|  | <b>Recognize</b>  | <b><i>Diversity</i></b>   |
|  | <b>Promote</b>    | <b><i>Opening</i></b>     |

Summarizing e-activities should have as a goal the stimulation of profound learning and learning to learn. They should promote the knowledge transfer between different contexts and its application in professional settings where the learners belong or might want to belong. According with Cabreo and Román, 2006, we can classify, in a hierarchical way, the e-activities regarding their functions in



- Socialization: the ones used as an “ice-breaker” amongst participants and that promote the virtual class notion – online socialization;
- Acquirement of concepts or specific vocabulary;
- Deepening of a certain subject;
- Transfer of knowledge to different contexts;
- Application of contents and lessons to the professional contexts.

The e-activities can be conceived in an unsynchronized or synchronized way. In the first case, the students may accomplish them in their rhythm, without being necessary to be online the whole time. In the second case, these activities can only be developed when all participants are online at the same time, through chats or other support that allow communication in real time. This situation makes these types of activities less flexible and can lead to constraints from more introvert students. Unsynchronized activities are more flexible but may create a feeling of isolation amongst the participants.

#### *Design of e-activities*

In the design of an e-activity, we should start by keeping in mind the result of the learning process. So we should try to answer the question: What do students need to learn?

As mentioned previously, another crucial element is motivation. Meaning, what moves you to learn? What makes students want to learn?

In the conception of an e-activity, some elements should be made clear. An activity of online learning will explain to the students what they’ll learn through the activity and demonstrate, in a clear way, the relationship between the task, the learning outcome and the evaluation.

Another important aspect is the clear definition of the teacher’s role in the process. The teacher’s role is important for the student’s and should be clarified at the beginning of the process, so they can feel followed-up and assured to receive feedback. This last aspect is primordial and can make be part of the activity throughout the process or happen at the end of it.

In the conception of an e-activity, the following aspects should be taken into account – Figure 4.

**Figure 4.** *Critical Variables of Design of E-Activity*

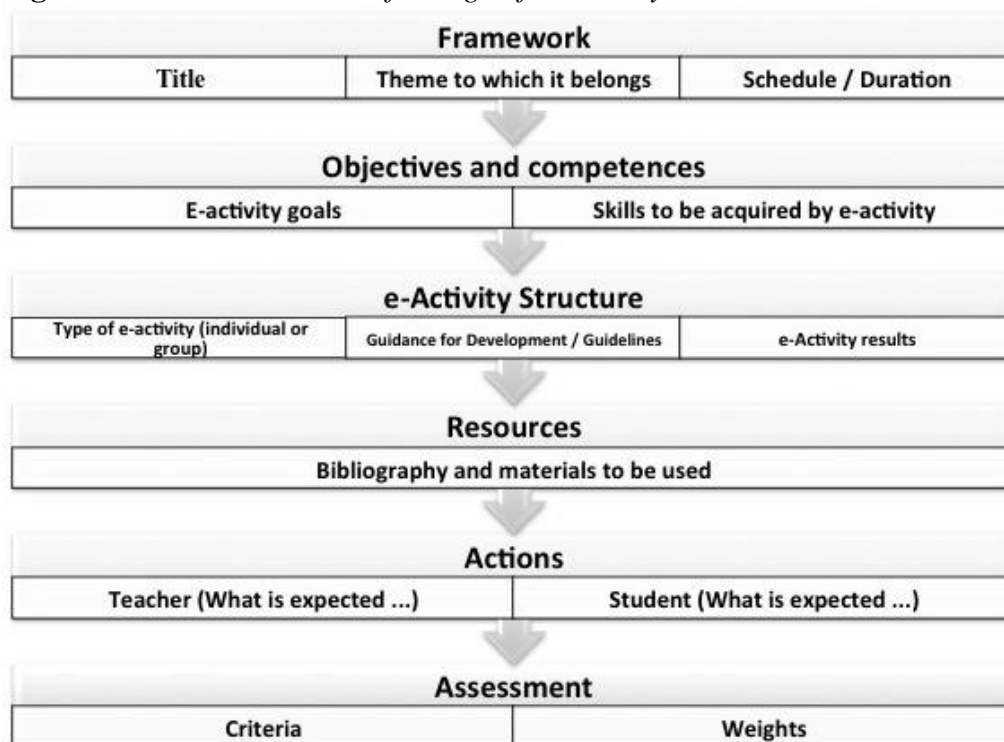


Figure 4 makes it clear that in the conception of e-activities six areas should be taken into account. The first Framework relates to the importance of contextualizing the e-activities in the learning contents. The timing issue shouldn't be forgotten. There should be a clear indication of when the activity is going to happen in the course calendar (Schedule) – e.g. between the 13<sup>th</sup> and 15<sup>th</sup> week – and its duration (Duration) – e.g. one week. In the second area, we find aspects related with the e-activity goals and the expected competences achieved after its accomplishment. The third area regards the Structure of the e-activity: is it an individual, paired or group task? How is it going to be developed? How many phases will involve? For example, is there going to be a reading phase, another with work presentations and other with discussion. How long will each phase take? Another aspect concerns the e-activity product. For example, is a written text expected? A conceptual map? A video? A document in an oral presentation format (e.g. *powerpoint*)? How long will it be?

In the e-activity the resources to complete the task should be indicated. In the area Action the type and moments in which you expect participants interventions from participants – teachers and students should be made clear. For example, in the teacher's case it may be specified that he/she will open the e-activity, help form pairs, encourage and support and intervene regularly in discussions.

In the last area, Assessment, clear indications should be provided concerning the elements that will be used to evaluate and their respective ponderation. For example,

| <i>Criteria</i>                      | <i>Ponderation</i> |
|--------------------------------------|--------------------|
| Developed activity                   | 50%                |
| Activity participation               | 20%                |
| Participation in the open discussion | 30%                |

Lastly, beyond these aspects, according with Cabreo and Romám (2006), the selection of an e-activity should contemplate criteria that includes individual characteristics of the students, there should be more focus in the e-activities that better promote the development of competencies and mobilize the higher number of capacities, as well as motivating activities, not forgetting the possibilities that online contexts provide for their development, in resources and interaction matters (synchronized and/or unsynchronized).

### **Final Considerations**

Throughout this work, we approached questions concerning the online distance education, its particularities and specificities. One of the ideas presented regards the impact of the introduction of information and communication technologies in the learning system. These systems allow a space, time and rhythm flexibility that better answer the needs for those who are part of it. They promote interactive scenarios and favour an autonomous learning, self-learning, as well as collaborative work. These learning contexts lead to changes in the teacher and student roles.

However, the technological mediation, *per se*, it's not a guarantee of the teaching-learning process. Concerning this issue, Ali (2004) wrote *the delivery medium is not the determining factor in the quality of learning per se; rather, course design determines the effectiveness of the learning* (page 18).

Actually, the technology is the support that allows the information to be available, in a broad term, and make use of different tools and formats to make it more appealing or more in line with the goals and receivers. It's the conceiver job to delineate the class proposal, taking into account its goals and the target audience. He/she should also be knowledgeable of the principles inherent to the learning process and how the student's learn. It's the conceiver job to find more appropriate strategies to achieve its goals. The diversity of pathways is vast. Therefore, the online distance education should include a set of learning activities to help the student to achieve the required knowledge, accounting for individual needs and characteristics.

These activities or e-activities are critical variables in these process. We can find different types of e-activities and its choice should be made focusing on the goals to achieve. So we may have "ice-breaking" e-activities with the goal of promoting the interaction between subjects at the beginning of a course or the construction of mental maps, Blogues, Playign roles in groups. These can be developed individually or in the group. However, the common goal is to

allow the students to have learning experiences, in a significant and interactive way. Meaning,

*(...) The e-activities should help student's stop being passive and become active, for the reason that learning doesn't refer exclusively to the storage/memorization of information, but also to its cognitive restructuration; definitely, we should make real actions of e-learning and not e-reading (...)* (Cabreo, 2006, page 8)

Lastly, it's important to approach the changes on the teacher role in online distance education contexts to respond to these challenges. The teacher sees its role wider and reformulated. Besides the knowledge inherent to the modules – scientific knowledge, the teacher will need to acquire competences on the technological level to deal with the tools available. He/she should have didactic knowledge, adapted to the specificity of the online context. The didactic knowledge used in a face to face classroom should be reformulated accounting for these new contexts (Goulão, 2012<sup>a</sup>; Barberà and Badia, 2004).

The transition of a face to face classroom context to an online distance education one is not made by the transposition *ipsis verbis* from one context to the other. On the contrary, each context implies a specific didactic that goes beyond the teaching contents. For that reason, it's necessary that teacher's who want to dedicate themselves to the online distance learning are aware of this and search for an adequate education for the development of competencies specific to the teaching in these contexts.

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