Learning activity 2 - Context-aware ubiquitous learning

For this activity I have chosen the CULE learning environment.

For the authors of [1] the model called ubiquitous context-aware learning (CULE) has been developed thanks to the advancement of wireless communication, sensors and mobile technologies. These technologies provide unprecedented opportunities to implement new learning strategies. They allow the integration of real-world learning environments with the resources of the digital world. Students can learn in real situations with the help or instructions of a computer system by using a mobile device to access digital content through wireless communications. In addition, the learning environment can detect and record student learning behaviors both in the real world and in the digital world with the help of sensor technology.

1. Enter the learning environment using simple words. What is the basic idea of this learning environment?

Context-aware ubiquitous learning is based on the central idea of placing students in learning situations that are located in the real world. The idea is that what has been learned in books can be difficult to apply in real situations. It is about developing environments that provide experiences using technology that relate your learning to the real world. The technologies that are used are mobile technologies, wireless connections and sensors. [2]

CULE emerges as continuity to TELE and ALE as a result of the overcrowding of mobile technology and the growth of the mobile communications industry

2. In your opinion, what is the focus or what can be taught in this learning environment? What are the specific educational goals?

I think that learning environments with levels of adaptability and sensitivity such as CULE can be used or applied for almost any learning situation, and at any educational level. The educational goals depend, in my opinion, on the type of resources that are created for these environments and on the use that is really given to the possibilities that this type of environment offers.

3. Identify the learning settings (formal or informal) that is suitable for this learning environment?

For the same reasons that I explained in the previous point, I think that these environments can be used for both formal and informal learning. Clearly for each use it will be necessary to design the resources that best suit the circumstances of learning. I think that CULE can be as flexible as desired depending on the ability and creativity to design useful educational applications for such an environment. I think that interdisciplinary teams are the key to the success of the application of such environments.

4. Identify the main features of this learning environment. Why is it different from other learning environments?

In [3] the following possibilities are explicitly highlighted for CULEs, whose most prominent resources are mobile devices

a. involve students in experimental learning and in context without restrictions of place, time and device
b. allow students to continue learning activities, initiated within the classroom, outside the classroom through their constant contextual interaction and communication with their classmates and teachers,
c. support demand access to educational resources
d. allow to apply or test new skills or knowledge immediately
e. expand the traditional classroom setting run by a teacher with informal learning activities conducted outside the classroom

5. What are the main advantages of this learning environment?

In general, these environments should favor the teaching-learning process, since they make it more flexible and motivating for the student. They have the ability to provide information and educational content adapted to the context of the student, anywhere and at any time. It implies an adaptation to the individual needs of the students since these environments have the ability to extract, interpret and use context information to adapt to the educational characteristics of the individual. [4]

6. What are the main disadvantages (if any) of this learning environment?

The main disadvantage, in my opinion, is the difficulty in building or making the right materials for these environments. In our country, the lack of resources for this type of collaborative research work makes it very difficult to solve this task to improve teaching processes in line with technological development and trends worldwide.

7. What are the impacts of the learning environment in real life?

I do not know cases in real life of application of these technologies in education, so I do not feel able to assess the impact. On the other hand, the study for this subject is very recent for me and I feel that I do not have enough background to have an opinion formed from theoretical knowledge.

8. Identify at least two concrete examples of the learning environment in real life authentic learning settings (implemented learning environments). Describe for each example, why you think it fits that category (TELE, ALE, CULE, SLE).

The first example I can think of is the platform used by Plan Ceibal in Uruguay for the teaching of mathematics. It is called Mathematics Adaptive Platform (PAM). It belongs to the ALE category (not only because its name suggests it) but because of its essential characteristics: It automatically adapts to the needs of the students, identifying areas to improve through the student's history and suggests series of

activities for the student perform. It also offers more complete return than only if the result is correct or incorrect, since it analyzes the answers to detect the cause of the error and provide alternative resolutions and ways of improvement.

Moodle has had great development and growth throughout its existence. Originally it has been classified within the TELE, but at this moment I think, and I have found extensive bibliography that allows it to be classified within the ALE. The following articles present examples of the use of Moodle as ALE [5], [6].

References

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