

## **The vision of the teacher for the management of sustainable learning, a case study**

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**Abstract:** Higher education (IES) programs include a sustainable approach for nearly 30 years. However, the environmental problems still have been unresolved. Despite that, also learning represents a sustainable process. As follows, universities instruct their teachers on the sustainable management of learning. The purpose of the work was to identify the expressions and terms associated with the appropriation of learning from the experience of the teacher. A case study was conducted through the collection of blogs written in a course during eight weeks at Universidad Veracruzana.

**Keywords:** ecological, university, educator, training, learner

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### **I. Introduction**

The United Nations Organization for education, science, and culture is known as UNESCO for its acronym in English. It has promoted the idea of sustainability in educative programs around the world since 1970. It was understood at first as an item exclusively with ecological application joined with elements of environmental training [1]. Among these there have been incorporated courses about the use of resources, waste reduction, and contaminants, saving energy, use, and recycling. Not so, despite these efforts, current university generations lack basic environmental knowledge. The outstanding issues build more harmonious and equitable nature societies [2].

In this sense, some of our greatest resources are time and space, but in many cases, they are wasted with minimal results. If we take the idea of the use of the time and space to the University environment, they are the first necessary resources to optimize, together to ensure great results like to obtain an outstanding academic performance.

Knowledge contributes to solving environmental problems. Solving ecology problems requires collaboration processes, methods, and tools, basic and applied research, in topics like agriculture, forestry, animal husbandry and the use of natural resources, specifically [3].

Additionally, it has the challenge to amalgamate their work with the others, to academics and non-academics, to promote in conjunction with social benefits environmental improvement processes. At the Universidad Veracruzana, sustainability is an essential part of the plan of work and development of the institution. A sustainable student becomes aware of their learning and applies a regular self-check of his progress and achievement of his goals. Education presents to students real situations to work possible solutions. As a consequence, the apprentice manages his learning and interacts with others to deal with this reality in the best way.

Sustainability embraces information technologies and performs a training hub in the curricula of higher education [4]. Also, the Higher Education Institutions (HEIs) have implemented blending learning strategies and massive open online courses or courses MOOC. A MOOC course increases the use of technology resources for expanding supply and for widespread education [5].

The advance of digital technology has created environments to encourage social interaction. It has identified the need to design collaborative activities with special care in the formation of groups, selection, clarity, flexibility, and significance of the task and its monitoring and control [6]. The process of managing developed several tools for customizing learning, sharing knowledge and to learn. The maps are among the most used tools, and they are also compatible with platforms and automated systems of distance education [7].

Making use of the technology, the Universidad Veracruzana implemented a distance-learning course for teachers on the sustainable management of learning. Therefore, the work aims to identify the expressions and terms associated with the appropriation of learning from the experience of the teacher.

## **II. Management Of Sustainable Learning**

The flexible and integral educative model has among its main purposes the supporting of the teaching practice transformation. The learners acquire the ability to solve the problems and the tasks in the contemporary world.

In cooperative learning, the student remains an active subject in their own learning process. It is a form of group work based on the collective construction of knowledge and the development of mixed abilities (learning and personal and social development), where each member of the group is responsible for their learning as well as the remaining members of the group. In this strategy, the professor can guide the practice and actions according to with a set of values: solidarity, responsibility, flexibility, sense of justice, service to others, etc. The skills developed are the ability to work both as an individual and collaboratively in teams, critical, the constructive and logical thinking when students confronted with complex situations. Other important competencies are searching, selection, organization, and evaluation of information, creativity to find out the solution, ability to self-criticism or self-assessment on their own performance, as well as co-assess working peer groups. The mentoring also helps to improve the ability to detect the need for autonomous learning, lifelong learning, develop arguments, conflict resolution skills, learn to negotiate and mediate, responsibility and honesty, flexibility, and assertiveness and empathy in relationships.

In collaborative research learning is evidenced when the students manage and apply the techniques properly, the evaluation is attitudinal and based on skills during their performance in the laboratory and theoretical knowledge, which must be displayed with an order, consistency, clarity, and using reflective logic in individual and group form. Through collaborative research, the student works in teams so they can get generic skills like solidarity and responsibility, derived from the learning to live together and the learning to be.

Additionally, students can improve their approach to some knowledge through information and communication technologies (ICTs), which also reinforces the collaborative learning by promoting group activities where they can reflecting and discussing.

The professor represents another participant of collaborative learning, which guides and leads along the process. In this way, self-evaluations of their own performance, knowledge, and skills that accomplish a better apprehension of experienced experiences arise.

## **III. Methodology**

A case study was conducted through the collection of blogs written in a course about "sustainable learning management" for teacher training during eight weeks. The teachers recorded their progress as they reviewed the strategy. A qualitative analysis of the information was performed. They have recognized three phases of the course, a) the beginning, b) the middle and c) the end; therefore, the results were organized accordingly. Expressions and terms associated with the appropriation of learning from the experience of the teacher were identified.

## **IV. Results**

We examined the case of a group of teachers who participated in a training course on sustainable management of the learning. The information presented below corresponds to the records found in their blogs.

### **a) At the beginning**

The first part of the course consisted of recognizing the virtual environment, the thematic content and commenting around learning expectations. The student success depends on his contribution, much openness or lack of it, predispose him to accommodate or not a sustainable management model. We identified three expressions that include provision for learning, motivation to improve teaching work and human and essential values in education.

"I arrive with the goal of considering the cleverest arguments to induce students to a better service to society. I think I could change my beliefs regarding teaching and I hope to be able to understand even more about the sustainability of my duties"

"I am encouraged because of the possibility of positioning my teaching work in an authentic context of service. I, therefore, maintain enormous expectations for this course"

"I believe that being aware that I am a subject of learning and what I am learning is an essential part of the process. So that the paired student promotes itself values of order, responsibility, commitment, organization, etc. to be able to appropriate his own knowledge"

**b) In the middle**

The teachers studied the subject of cooperation, the importance of dialogue, and problem-solving at a more progressive stage of the course. At this point, the teachers appreciated and practiced bases of sustainable management. They did activities like forums, discussions, feedbacks, and readings.

“The pedagogic strategy could be implemented in the classes”

“Sustainability contributes to the learning of others. The teacher and the students contribute and support to learn better. So the sustainability learning is unexclusive of an individual. Then, a group of students would be a sustainable group”

“The dialogue represents a significant part of the process of knowledge. Although the topic comprises the center of a discussion, also the skills of listening and sharing are important. An oral interchange is the better way through the students can recognize the others while sharing something of each one. The dialogue needs from the reliable and respectful environment”

**c) At the end**

The concluding stage included an essay and a proposal. Each teacher implemented a pedagogical strategy from a sustainable perspective. In addition, the teachers wrote their perceptions at this phase of the course.

“The students improve their entailment trough the sustainability strategy”

“The universities have increased the use of information and communication technologies (ICTs) because of educative innovation. The current students count with superior computational tools than previous generations, and the teachers have adopted the new ICTs to the curricula contents”

“The students take advantage of ICTs to promoting their own academic skills, like research and solving problems”

“The student becomes himself, in his own manager of learning; as a consequence he associates to appropriated spaces for work and obtains the searched answers”

## V. Conclusion

All the teachers understood the sustainability learning from the training course. Teachers did not begin without any idea; they showed notions from the activities to improve the environment promoted at the social sphere. The more unpleasant idea was the concept of sustainability and its relation with the learning. The teachers were trained with the main goal of applying the assimilated information in their own courses; thus, a training course influences over a group but later over a more massive academic group.

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