

Experiential learning: visiting libraries in Southern California.

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Abstract: Meaningful learning is considered an active methodology that allows acquiring knowledge from living the experience. An educational program based on the principles of Information Culture promotes, among diverse purposes, the access to knowledge from the visit to libraries in Southern California. The geographical proximity of both sides of the border between the United States (San Diego, California) and Mexico (Tijuana, Baja California), has allowed to strengthen relations between public and university libraries to give access to information and knowledge to students of the higher level through experiential experience.

Keywords: experiential learning, binational librarian cooperation, information culture, information management, library-academia linkage.

1. Introduction.

The current educational environments are characterized by the remarkable presence of technological resources that facilitate the access and use of information; the teaching-learning processes have been adapted to the new demands of the "student-users" to design new teaching strategies. Consequently, the ways of learning have also changed, which poses a real challenge in the transition of the training models. In this context, the role of teachers has also been reconsidered; the teacher is the guiding element of the training process and the student takes an active role where collaboration and autonomy become key elements of their learning.

In this context, active methodologies take a significant role, particularly those which favor the active role of students articulated by all the elements that make up the process: the activities and their evaluation, as well as the contents.

Which, according to Labrador and Andreu (2008), the active methodologies are the methods, techniques and strategies used by the teacher to convert the teaching process into activities that encourage the active participation of the student and direct them to learning.

In the university field it is intended for students to achieve deep and stable learning over time, which impact the workplace and their daily lives. The university education promotes the collaborative construction of learning, integrating previous knowledge and placing the learning experiences on another cognitive level, that is, that the learning is truly significant. To achieve this, according to Silva and Maturana (2017, p.119), teachers are required to assess the nature of this conception of learning, in addition, to planning the teaching considering all that implies generating this transformation.

Achieving this transformation requires specific actions that enable each educational actor to play its role. This type of actions were taken into account in designing an institutional plan (CETYS Universidad, 2011), which was implemented since 2010 in CETYS University, with the purpose of generating Information Culture, which implied a series of tasks such as acquisition of technological equipment, updating of libraries in analogue and digital collections; including databases, training of personnel, hiring of professional personnel, infrastructure and designing the subject of Information Management. This subject has the aim of developing in the students the skills of access, evaluation and use of information, considered as basic skills that graduates should have as a differentiator of their educational model. Hence the relevance of making the learning has an impact even after having completed their professional training.

One of the activities that comprise this subject of Information Management, is a field practice that obeys to the principles of active methodologies; the teacher

proposes the students to develop a research project, which implies a construction process throughout the semester composed of three active methodologies such as project work, inverted class and a collaborative work from the visit to various local and foreign libraries to consult information sources that will make up their research work.

Another determining factor that has contributed to significant learning in this practice is the geographical location, since CETYS University is located right on the borderline of the northern border of Mexico in Tijuana, Baja California, which borders the state of California, located on the southern border of the United States of America. This closeness has allowed creating and developing close links between libraries through binational collaboration agreements that allow the exchange of materials and collections, as well as good practices between librarians and their libraries. Agreements have been signed with the university libraries of San Diego State University (SDSU), University of California San Diego (UCSD) and San Diego Public Library (SDPL). Libraries that have been visited by our students in the last four years, reaching a figure of more than 1,000 students who have crossed the border to carry out their project and it is estimated that more than 10,000 digital and printed information sources have been consulted.

2. Journey to the libraries: the experiential process starts.

The design of this practice has facilitated meaningful learning through an experiential process in a context created for the student to guide their process from different approaches; in the socio-constructivist conception, learning is generated when the student participates actively in its process, building meanings from experiences, content and the development of proposals through a concrete activity based on collaboration among their peers (Biggs, 2008).

The experiential learning experienced by students who have visited Southern California libraries involves meanings derived from context, which are arbitrarily attributed to people, surrounding events and objects which attribute idiosyncratic meanings to students (Palazón, Gómez, Gómez, Pérez and Gómez, 2011). The geographical proximity implies a logistics created by the masters of the subject of Information Management, which consists of crossing the northern border of Mexico to San Diego, California in a pedestrian way and then take the trolley (light urban train) as a means of transportation to go to the libraries, this experience turns out to be the most significant for students.

Once at their destination, students begin to search for information sources based on the design of a search for information strategy prior to the visit (inverted class) conducted by their teacher, which, according to Zabalza (2007), the teaching competence of the university teacher is closely related to the subjects to whom he has to make learn the contents of his discipline, for which a whole

other process of understanding of the learning is required, so the participation of the teacher is a determining factor in the planning of said activity.

The active methodology aimed at experiential learning has its roots in the psychological theories of constructivism. The focus is on the student, it is necessary to know how they learn and how they build their knowledge; the role of the teacher will be that of a guide and tutor in meaningful learning (Palazón et al, 2011). For this to happen, there must be, on the one hand, an intentionality, a predisposition to learn and, on the other, the task of learning; what must be learned must be potentially meaningful. According to Ausubel: "Meaningful reception learning typically occurs as potentially meaningful instructional material enters the learner's cognitive field and interacts with and is appropriately subsumed under a relevant and more inclusive conceptual system." (Ausubel, 1963, p.25).

Following the established by Palazón et al. (2011), an important component of the model is that which refers to the learning process, where both the motives or intentions of the student and the adopted strategies play a fundamental role in the quality of learning and constitute the central focus of the model. Therefore a learning approach is based on a motive or intention that marks the direction that learning should follow and a strategy or series of strategies that will drive that direction (p.28). Whatever the interest for a particular task, the student has relatively stable reasons for his academic work, since he has a conception about what academic learning should be.

3. Design of the activity to be carried out by the students.

Thinking about the formative process from active methodologies does not only mean incorporating isolated activities that promote participation, but it implies rethinking the action of the teacher at the service of the student. The teacher acquires a mediating nature that allows focusing the deep learning dispositions, through activities that enable participation, cooperation, creativity and reflection on the task in the student (Silva and Maturana, 2017, p.122).

Particularly the designed activity requires a series of requirements indicated in an evaluation rubric in which the skills for access to information are emphasized, which according to Biggs (2008), the activities will make sense if they are presented constructively aligned, that is, if there is a relationship of coherence between the purposes or results of learning, teaching and learning activities and the evaluation of a subject. The planned teaching activities must allow the student to achieve the learning results during the learning process (Rué, 2007).

The integration of thoughts, feelings and actions (Novak, 1981, Novak and Gowin, 1996), grants a humanistic connotation to meaningful learning,

proposing that it underlies constructive, positive integration between thoughts, feelings and actions that lead to human aggrandizement.

For the development of a training process focused on the activity above the content, three methodologies were implemented; work by project, inverted class and collaborative work. The Inverted Classroom or Flipped Classroom is a methodology that reverses the order of a traditional class, the presentation of the content is done before the face-to-face class through short videos, audios or readings, among other inputs, that the students review in the autonomous work prior to the session.

The face-to-face class is focused on carrying out activities where the content previously addressed by the students is used. From the recognition of the importance of content domain, the extended understanding is reached with the teacher mediation at the moment of solving the task (Schneider, Froze, Rolon and Mara de Almeida, 2013).

4. Collaborative work.

Learning based on collaborative work seeks to generate learning through the cohesive work of heterogeneous groups of students, which achieve greater degrees of autonomy and responsibility, as the strategy is replicated during the academic year. For its correct implementation, it is necessary that the professor encourages instances of permanent feedback and designs tasks that consider the following characteristics: challenging for the development of complex thinking; precise and brief, but that mobilize different knowledge and that also involve decision making. (Michaelsen, Davidson & Major, 2014).

The student-centered learning is of a higher level of commitment and student work, favoring autonomy and generating skills for learning to learn in collaboration with peers. This gives it a leading role, favors collaborative and autonomous learning (Rué, 2007). It allows developing higher order skills in students, such as: collaboration, self-learning, etc., demanded by the knowledge society and useful not only for academic life but for professional life as well (Zabalza, 2007).

The methodologies used were those that the teacher considered feasible within their planning, which would allow carrying them out in time and form, including their evaluation and feedback. Any of these represent an invitation for students to act actively in accordance with the purposes defined for the course, having clarity of these (Webster, Chan, Prosser and Watkins, 2009), thus planning takes on a very relevant role, since it will allow defining the most appropriate proposal according to the formative purposes, which is challenging for the students and can be implemented according to the conditions of the context in which the teacher is (Fernández, 2006).

UNESCO (2004), within the framework of the development of teaching competencies, mentions that the teacher will have to acquire the necessary skills to create and orchestrate complex learning environments, incorporating students in activities where they can build knowledge in environments of social and personal interaction; fostering collaboration, reflection, analysis and criticism with the ability to monetize the different spaces where knowledge is produced.

5. Active methodologies and theories of learning in field practice.

Since the new teaching and learning systems began to align with objectives, competences, methodologies and evaluation, active methodologies have become one of the most used strategies for the acquisition of new knowledge. The elements that make up these methodologies allow students to develop the capacity for analysis and synthesis, so that they can apply knowledge to practice and solve problems, adapt to new situations, manage information and time effectively, and work in team and with autonomy. To achieve a teaching that stimulates meaningful learning a reference to the proposal of Ausubel presented in the sixties is made, (Ausubel 1963, 1968) and reiterated by him at the end of the century (Ausubel, 2000), it serves as a reference to organize a teaching focused on understanding, meaning and the pleasure of learning.

The challenge for university teaching is to move from an approach of the teaching-learning process that transmits information to one that promotes the participation of students and in many cases traditional strategies do not allow to give a response to the training needs of current university students, given the democratization of university enrollment, the diversity in the composition of students and the need for greater support to guide their deep learning (Biggs, 2008).

Using these methodologies implies focusing the process on the activities above the content, even though the latter has been the traditional way to structure teaching. The contents continue to exist, but they make sense in the context of the activities. Gros (2011) differentiates between conceiving the process of teaching focused on content or focused on activities.

In constructivism, learning is not a passive process in which the student is "absorbing" or accumulating some knowledge that is transmitted to them, but, on the contrary, it is an eminently active process in which the student builds new ideas and concepts from their previous knowledge of the world. According to Navarro (2005), this process is the basis of autonomy, which enables the person to develop a critical vision about their way of thinking and about their knowledge about the world and this critical thinking is key so that the student develop their own ideas.

On the other hand, for Rué (2009), autonomy is a continuous development process, from a specific and delimited starting position. Therefore, autonomy in learning is one of the keys to success in training as a competence in higher education. Considering that information is constantly renewed, knowledge becomes obsolete, new theories flow at a dizzying speed, all this implies a new way of understanding training, "learning to learn" throughout life; basic principle for the development of competences.

The perspective of Novak (1981) is that when learning is meaningful the learner grows, has a good feeling and is predisposed to new learning in the area. In counterpoint, when learning is mechanical, the learner develops an attitude of rejection of the teaching material and does not predispose to meaningful learning. Much of what happens in teaching and learning situations occurs between these two extremes. Novak's vision is important because the predisposition for learning is one of the conditions of meaningful learning and it certainly relates to the integration of thoughts, feelings and actions.

According to Moreira (2012), teaching should be organized in such a way that it facilitates meaningful learning and provide the student with positive affective experiences. Thoughts, feelings and actions are integrated into the student as a person. The personal interaction, the negotiation of meanings between students and teacher and among themselves is fundamental to the grasp of meanings (Gowin, 1981).

To generate these meanings, situations must be created that correspond to the world, environment, age and culture of the students. It is situations that give meaning to knowledge (Vergnaud, 1990). Situations outside the context of students should be progressively worked on progressively at increasing levels of complexity. Meaningful learning is progressive, since mastery of a field of knowledge consists of a systematized, slow process, with breaks and continuities.

6. Methodology

This work is presented as a qualitative research in which data were collected through the technique of focus group in order to assess the experiences of each participant. The group was formed by 11 students of the first semester of the psychology career at CETYS University, of which seven were women and three men, with ages between 18 and 21. The main requirement of the sample was to have visited some of the libraries of Southern California as part of the activities of the subject of Information Management.

A discussion guide was designed consisting of 10 topics from which derived 28 items, which are shown in Table 1 below.

Categories	Items
1. Expectation of the visit	Did you know about the existence of these libraries? Did you already know, or had you visited any of these libraries before? What library did you visit? What was your expectation of this visit? Were you excited about the idea of doing these visits?
2. Work plan (academic activity)	Did you have a specific activity or a work plan to carry out in the library? What was it? Did you accomplish your assigned task? What percentage of your activity did you achieve? How many sources did you consult?
3. Journey-Transportation (Mexico-USA)	What was your means of transportation to get to the library? Describe that experience Were there any unpleasant experiences during the journey and the visit to the library?
4. Infrastructure, services and collection of the library visited	How do you rate the treatment and attention of library staff? What do you think about the facilities, equipment and infrastructure of the library? What did you think about the collection of the library? What do you think about the services offered by the library? Did you know that some libraries sell used books at very affordable prices? Did you have the opportunity to buy used books? What books did you buy and how much did you spend on them?
5. Linking (CETYS-bibliotecas)	Did you know that CETYS has an agreement with those libraries? Do you know what the agreement is about?
6. Acquired knowledge	What new knowledge did you learn with this visit? What did this visit bring to your person? Have you been asked to consult library information in other subjects?
7. Acquired experience	Do you think that the visit encouraged coexistence with your colleagues? After the visit to the library, did you perform other activities? What would you change or add to this experience? Would you recommend your classmates to visit the libraries to

	enrich their academic work? After this experience, has your perception of the function of libraries changed?
8. Information Search Strategies	What was the search strategy for your sources in the library? Did you use the library catalog to search your sources? Did you ask for help from the library staff?
9. Expectations	Have you visited the library again? Could you go to the library on your own? Would you like to include a visit to a museum on the same day?
10. Assessment of the experience	From 1 to 10, with 1 being the lowest score and 10 the highest, what rating would you give to the overall experience of having visited the library? How do you consider the experience, bad, average, good or excellent? For you, the time spent visiting the library seemed: little, enough, necessary or too much time?

Table 1. Discussion guide.

The results were processed through thematic analysis using the ATLAS.ti tool to identify themes or patterns that allow inferring results which promote the understanding of the phenomenon (Braun and Clarke, 2006), to link the concepts with the opinions of the participants. The open and axial coding of Strauss & Corbin (2002) was used to code each response. It is considered open "to discover and develop the concepts to expose the thoughts and ideas and meanings (p.111). The axial condition refers to the fact that "a category represents a phenomenon, problem or meaningful event for the interviewees" (p.137).

The information was codified and categorized identifying diverse passages of the text with a theme and relating it to other passages and other codes to obtain different connections. Textual quotations of the participants are presented as part of the inductive reasoning based on the previously established categories and codes (San Martín, 2013).

Results

In this tenor, the most relevant results are presented in function of experiential learning through active methodologies; the main topics addressed are analyzed and discussed, along with some of quotes from the participants, following the structure of the topics raised for this study. The participants are identified as P1, P2, etc., successively and in order of participation.

1. Expectation of the visit to the libraries.

Considering that the visit to libraries is planned from the beginning of the semester, there is enough time to generate expectation among the students. Prior to the activity, an exploration is made on the website of the library to visit, as well as the route that is expected to be taken. The curiosity is increased since most of the students do not know the libraries but they know of their existence and in some cases they had never heard of them.

P1. "I knew about the existence of these libraries, I had never visited them, I was very excited for the SDSU because I imagined that there would be many books and I liked very much the Central Public Library because it had a very unusual and cool structure. I really liked the way they treated us and the tour they gave us through the libraries."

P2 "I did not know about the existence of any of these libraries, I really liked both because there is a great variety of books, personally I found much content on what I was looking for in the library of the SDSU and in the public library I took the guided tour and I liked it very much ".

2. Work plan (academic activity).

The visit to the libraries has an academic purpose that consists mainly of searching and consulting sources of information, whether printed or digital. The students have a work scheme that includes an information search strategy with a previously selected research topic. The approximate time to carry out the activity is of about three hours; including the guided tour and the search for sources.

P4. "When I started looking for books I decided to change the subject due to the great variety of texts ... I was able to rescue 20 more books. I started by reviewing the abstracts of each book to give me an idea and then at home I continued to search the internet in the library catalog."

P8. "I went with the intention of finding information for a topic for which I already had some sources, but when I got there, I realized that there were many books and topics, so I decided to change the subject, as I found other more interesting topics. I would have liked to have more time because I still came home and tried to enter the digital library and I searched for more books that I did not have the opportunity to review ... I still kept looking for more material."

3. Journey-Transportation (Mexico-USA).

Given the geographical location of both border cities, it is relatively easy to move from one place to another, there are various means of transportation that facilitate the access. However, despite the constant flow of people who cross the

northern border daily for work, business or tourism purposes, libraries are not common visiting destinations, so it is again an element that generates expectation in the student.

P5. *"We crossed the border, we agreed to meet at the trolley station and from there, we all left together. I really liked traveling by trolley because I had never done it ... it was very fun; we were able to spend time with all the classmates... I would like to go back and keep using the trolley, besides it's really not expensive at all."*

P2. *"We arrived at the libraries by trolley, it was my first time traveling in it and it was quite nice, we could spend time together, and besides it is quite practical because you can use it all day and go wherever you want, I would like to use it again".*

4. Infrastructure, services and collection of the library visited.

Another aspect that particularly draws the attention of students is the infrastructure of libraries; the architecture, the services, the collection and the attention of the personnel that receives them. Although a previous visualization is made on the websites of the libraries, being present inside the buildings tends to impress the students. It should be mentioned that these libraries have an architectural design.

P1. *"When I arrived at the SDSU library, I was very impressed by how big it was, it even had an elevator that I used several times. I really liked how they had everything so organized and so many spaces that there were for the needs of the people of the campus ... one of the things that caught my attention, was that if you needed a book the university moved the means to get it."*

P7. *"I really liked how they combine art and infrastructure in the Public Central Library, besides they gave us a tour of the entire library. There was an area for children and there was also an area in which people who needed attention ... I really liked that it was given that attention and that everyone had access to internet services ... there were also multimedia, records, videos and I liked the accessibility that there is for people who do not have access to these materials, the library is their only option."*

5. Acquired knowledge and experience.

This field practice was originally designed so that students could broaden their field of search for sources of information for their documentary research project,

however, one of the findings that has stood out, is that learning is centered on the experience of visiting a place outside their context, which generates an expectation that is exceeded thanks to the infrastructure and services provided by these libraries.

When the students were asked what their main learning was in this practice, in general, most of them agree on the following answers;

"Learning to move in a city that I do not know much about"

"I spend time with colleagues from other groups"

"That I can go to San Diego to visit other places, not just shopping"

"I was not aware of everything that libraries offer"

"I learned to move alone in another city"

"I learned how to look for a book on the bookshelf"

"It inspires me to see how library volunteers do their job with great pleasure and respect"

6. Prospective and evaluation of the experience.

For the professors who teach the subject of Information Management, it is important to conduct evaluations on their practices, knowing the assessment of the activities allows teachers to provide feedback on their teaching activities. That makes the assessment of this activity important to make adjustments and updates constantly. In this sense, the students expressed the following assessments;

"I recommend that students from other subjects go to libraries to consult information"

"I considered libraries to be boring places, now I know they are much more"

"I would like to dedicate more time to this activity, you learn things related to the subject and live new personal experiences"

"The San Diego libraries are very different from what we are used to, they are big, well organized and beautiful"

"It is a good experience and you learn many things, they give us a better overview of the current world, the experience is very positive."

In general, students consider this activity as excellent, most consider returning on their own to seek information if their tasks require it.

Conclusion

The research shows that meaningful learning in the acquisition of new knowledge implies relating meanings through the understanding of new situations. The situational factors of the students' environment generate expectation of knowing a new place and it provokes the particular interest to live new experiences. The disposition shown by a when approaching a specific task established by the teacher, as Palazón et al (2011) points out, implies a challenge in which the teacher plays a determining role as they get involved in the design of an activity that foresees and anticipates possible learning situations.

As for the categories that showed a higher recurrence, they were, firstly; the one related to spending time with other members of the group, the students appreciate the opportunity to meet colleagues with whom they had not previously interacted. This indicates that socialization is a relevant factor among university students. This can be explained, considering that they are new students, of first semester and are in the process of integration to the university community.

The second category that stands out is that related to the opportunity of traveling "alone." In many cases, it is the first time they travel on their own to a foreign city that they regularly visit as a family with a purchase purpose, it meant a new experience to visit it on their own with an academic objective. In addition, most of the students agreed that the means of transport used (trolley), gives them the opportunity to travel alone and therefore consider returning to the libraries on their own. Which, from meaningful learning, represents autonomy, which is a key element of the learning that, according to Rué (2009), is part of the continuous development process for the formation of competences.

The third category is represented by the recognition and astonishment of the services, attention and infrastructure of the libraries. The students coincided in recognizing that the services offered to the community in general for free, get their attention, since in their own environment this element is not usually appreciated. It should be noted that the architectural design of buildings is a feature that was noted, especially the spaces dedicated to art, theme and age spaces, spaces where you can read and eat food, as well as recreational spaces.

Finally, although paradoxical, the fourth category is related to the academic purpose; the students recognize that the collections of the libraries contributed to their documentary research work as they found a wide variety of sources of information. It is very likely that 100% of the collection is in English, however, this did not represent an obstacle, since most of the students are fluent in the language or have an advanced level of English.

The components of meaningful learning can be valuable to integrate them into teaching processes as long as the teacher is involved in the systematized design of an activity composed of active methodologies that expose the student to new scenarios that generate expectations, curiosity and astonishment.

References

- Ausubel, D. P. (1963). *The psychology of meaningful verbal learning*. New York: Grune & Stratton.
- Ausubel, D. P. (1968). *Educational psychology: a cognitive view*. New York: Holt, Rinehart, and Winston.
- Ausubel, D.P. (2000). *The acquisition and retention of knowledge: a cognitive view*. Dordrecht: Kluwer Academic Publishers.
- Biggs, J. (2008). *Calidad del aprendizaje universitario*. Madrid, ES: Narcea.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi:10.1191/1478088706qp063oa
- CETYS Universidad. (2011). *Plan de Desarrollo 2020*. Mexicali, B.C.: IENAC.
- Fernández, A. (2006). Metodologías activas para la formación de competencias. *Educatio siglo XXI*, 24, 35-56. Retrieved from: <http://revistas.um.es/educatio/article/view/152>
- Gowin, D.B. (1981). *Educating*. Ithaca, N.Y.: Cornell University Press.
- Gros, B. (2011). Evolución y retos de la educación virtual: construyendo en el siglo XXI. Barcelona, ES: Editorial UOC. <https://doi.org/10.24215/23468866e029>
- Labrador, M. & Andreu, M. (2008). *Metodologías activas*. Valencia, ES: Ediciones Universidad Politécnica de Valencia.
- Michaelson, L. K., Davidson, N., & Major, C. H. (2014). Team-based learning practices and principles in comparison with cooperative learning and problem-based learning. *Journal on Excellence in College Teaching*, 25.
- Moreira, M.A. (2012). Aprendizaje significativo, campos conceptuales y pedagogía de la autonomía: implicaciones para la enseñanza Aprendizagem Significativa em Revista, 2(1): 44-45.
- Navarro, M. (2005). *Formación en la autonomía de aprendizaje: implicaciones pedagógicas*. Murcia: Universidad Católica San Antonio.
- Novak, J.D. (1981). *Uma teoria de educação*. São Paulo: Pioneira. Traducción al portugués, de M.A. Moreira, do original *A theory of education*. Ithaca, N.Y: Cornell University, 1977.
- Novak, J.D. & Gowin, D.B. (1996). *Aprender a aprender*. Lisboa: Plátano Edições Técnicas. Translation to Portuguese, by Carla Valadares, from the original *Learning how to learn*.
- Palazón, A., Gómez, M., Gómez, J., Pérez, M. & Gómez, J. (2011). Bordón. *Revista de pedagogía*. Volume 63. Number 2. Pages 27-40. Editor: Sociedad Española de Pedagogía.
- Rué, J. (2007). *Enseñar en la universidad. El EEES como reto para la educación superior*. Madrid, ES: Narcea.
- Rué, J. (2009). *El aprendizaje Autónomo en Educación Superior*. Madrid: Narcea.
- San Martín, C. (2013). Teoría Fundamentada y Atlas.ti: recursos metodológicos para la investigación educativa. *Revista Electrónica de Investigación Educativa*. Vol. 16, Number 1, 2014. Facultad de Educación, Universidad Católica de Temuco, Chile.

- Schneider, E. Froze, I., Rolon, V., & Mara de Almeida, C. (2013) Sala de Aula Invertida em EAD: uma proposta de Blended Learning. *Revista Intersaberes* 8(16), 68-81. Retrieved from: www.grupouninter.com.br/intersaberes/index.php/revista/issue/view/77
- Silva, J. & Maturana, D. (2017). Una propuesta de modelo para introducir metodologías activas en educación superior. *Innovación educativa*. (Méx. DF) [online]. 2017, vol.17, n.73, pp.117-131. ISSN 1665-2673.
- Strauss, A. & Corbin, J. (2002). *Bases de la investigación cualitativa. Técnicas y procedimientos para desarrollar la Teoría Fundamentada*. Medellín: Universidad de Antioquia.
- UNESCO (2004). *Las tecnologías de la información y la comunicación en la formación docente*. Paris, FR: Informe UNESCO.
- Vergnaud, G. (1990). La théorie des champs conceptuels. *Recherches en Didactique des Mathématiques*, 10(23): 133-170.
- Zabalza, M. (2007). *Competencias docentes del profesorado universitario: calidad del desarrollo profesional*. Madrid: Narcea.