Human and Artificial Intelligence for the Society of the Future European Distance and E-Learning Network (EDEN) Proceedings 2020 Annual Conference | Timisoara, 22-24 June, 2020 ISSN 2707-2819

doi: 10.38069/edenconf-2020-ac0021



THE NAME OF THE ROSE: AN ENIGMATIC RELATIONSHIP BETWEEN TACIT AND EXPLICIT KNOWLEDGE TO INNOVATE THE PRODUCTION PROCESS OF EDUCATIONAL RESOURCES

Tomás Bautista Godínez, Ricardo Arroyo-Mendoza, Jorge León-Martínez, Edith Tapia-Rangel, Coordination of Open University and Distance Education, UNAM, Mexico

Abstract

The objective of this conference consists of presenting a humanistic process for developing support units for knowledge (UAPA: Unidades de Apoyo para el Aprendizaje). Currently, National Autonomous University of Mexico (UNAM), has a production process of these already mentioned educational resources. Based on the results of a series of profound interviews where educational coordinators mediated by technology. We identify this phenomenon as The Name of the Rose. This phenomenon is associated with social relationships between subjects and in particular between the teacher and the pedagogical advisor. This has let us define the theoretical-conceptual basis to outline this process of humanistic production.

Context

The access to teaching knowledge generated in the gaps of superior education has led to a diverse phenomenon related to the process of turning the tacit knowledge of university teachers attainable. The unveiling of teacher's tacit knowledge is the starting point to recognize the phenomenon that interests us for transforming the conversion process from tacit to explicit knowledge. To go into this phenomenon has the purpose of innovating the production process of the educational context, known as learning objects (Polsani, 2006) to achieve higher production and a better quality of these already mentioned resources.

We focus our investigation on a study case. It corresponds to one of the production processes of the educational resources from the National Autonomous University of Mexico (UNAM). This university is one of the main public and autonomous institutions in Mexico. Its enrolment comes to 356,530 students and has a teaching staff of 41,318; from this teaching staff only 12,368 (30%) are full-time teachers (UNAM, 2019). The university's growth according to this large number started from an event known as a student's movement in 1968. In the early '70s, the university introduced the open university system

and in 1999 the distance education mediated by technology with the objective of expanding the educational range mainly through all Mexican territory. In this open space, the production process of digital education resources was developed.

In 2005, the university designed a development process of educational resources to promote the open university system and long-distance education. Support units for knowledge (UAPA: Unidades de Apoyo para el Aprendizaje) are found between these two systems. These resources are available online (http://uapa.cuaed.unam.mx) for university students and the general public. The UAPAs that are available online have been viewed more than 1,300,000 times by 6,000 users. These figures reveal the recurrence of the use of these resources.

The theoretical basis of this process corresponds to the conversion or creation of knowledge (Ikujiro & Takeuchi, 1995), which was developed under a cooperative culture, such as the Japanese (Sato, 2007). The basic assumption on which this process was designed is that by having a systematic production process of educational resources and where different subjects with different disciplinary knowledge will have an efficient process. Transfer and usage of this theoretical basis to a university space where autonomy and cathedra freedom are promoted have direct consequences that, of course, were not initially identified. Facing this situation and based on a process of truth or simulation of truth (Badiou, 2004), we formulated the next questions:

- Which phenomenon occurred during the UAPA production process?
- Which consequences have this phenomenon for improving this mentioned process?

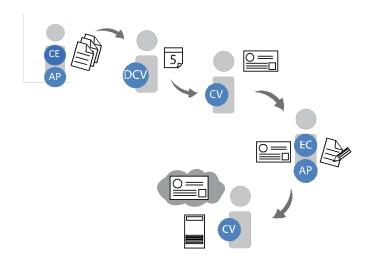
UAPA current production process

The process that is currently in operation is formed by five stages in which different subjects participate as working cells (León Martínez, 2017). See Figure 1.

Working cells are basically formed by instructional designers (pedagogical advisors), graphic designers (integrators in digital platforms), style editors and of course, teachers better known as experts in content.

The process begins by training the expert in content (professor) about the process that generates UAPA. Subsequently, the relation between the pedagogical advisor's work and the expert in content for exchanging knowledge begin; the advisor guides the elaboration of the content by monitoring mainly two aspects: congruence between objectives and learning activities watching at all times that each one of the elements that form UAPA are accomplished, emphasizing instructions and didactic language oriented towards the students (see Figure 2). The didactic material which is the result of this mentioned work

relation named "instructional script" is received by the style editor who examines it according to standards and production regulations, for example, the clarity of didactic and checking plagiarism. Finally, the integrator transforms "the instructional script" into resources, activities and other components within the digital platform which works as an archive for UAPA.



CE: Corrector de estilo / style correction

AP: Asesor pedagógico / pedagogical advisor

DCV: Departamento de Comunicación visual / Department of Visual Communication

CV: Comunicador visual / visual communicator

EC: Experto en contenido / content expert

Figure 1. Diagram of the creation process of UAPA

With this process, 752 UAPA have been produced in the last four years. Its diversity is oriented to the teaching of English and other disciplinary areas such as medicine, accounting, law, nursing, among others.

The production of these educational resources has caused us to consider several questions based on what has been observed in situ between different stakeholders involved before, during and after this production process.

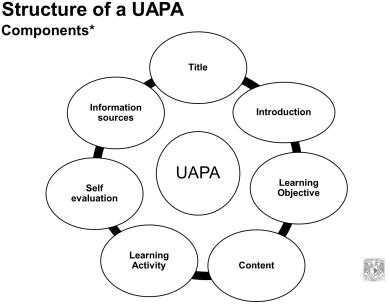


Figure 2. Components of UAPA

The phenomenon: The Name of the Rose

A profound interview was the tool used to recognize this phenomenon. The interview consists of five open questions. Six technology-mediated education coordinators from different UNAM disciplinary fields participated. As part of these research progress we only describe, in general terms, the outcomes we obtained through two questions:

- What are the reasons why the development of the UAPA has been promoted?
- What obstacles has faced coordination in the development of the UAPA?

Next, we describe, as part of what we have managed to recognize through this empirical qualitative research, two of the main findings regarding the reasons and obstacles that coordinators have faced during the UAPA's production process.

The main reason widely recognized is the learning reinforcement, either in an autonomous way or directed by a professor. The provision of the UAPA has made it possible for students to use them on their initiative to exercise in advance the topics that are reviewed during the class, or to reinforce what was taught in a certain session (class). Some others use them to approve certain subjects without a regular enrolment; that is, to pass the mentioned subject in an extraordinary way.

Those interviewed identified that the main obstacle is the interaction between the pedagogical advisor and the expert in content (professor). We have called The Name of the Rose to the conflict of this relationship. This relation is a determining factor for the creation of a product that allows, promotes and reinforces the student' learning process.

Transforming an explicit knowledge into a tacit one becomes relevant at the moment in which the expert in content experiences a cognitive process within himself to transform what he has learned and communicates to his students traditionally and verbally and onsite class, in a new written form supported by technology. At this moment, the phenomenon that we have called The Name of the Rose, is produced. In this film work by screenwriter Umberto Eco, it deals with the subject of the property of restrained knowledge for only some privileged that have access to it through the reading of poisoned books, causing death to anyone who accesses it. Under this context, and making an analogy with the film, the tacit knowledge that the expert has, resembles the unreachable book for everyone.

Poisoning occurs from the form of the relationship between the pedagogical advisor and the expert. If this relationship occurs in an imposing or intrusive way by any of the actors, the tacit knowledge that the professor has is unreachable and, therefore, transformation into explicit knowledge is not achieved or hard to obtain. That is the reason why we called this phenomenon as The Name of the Rose.

Conceptual Framework: Humanism for innovation within the production process of digital educational resources

Humanism is the practice of an idea to change lives from the individual or collective subject itself. Recognizes the past that has originated the situation and gives its name to the phenomenon that is present in it. It forces us to enter dialectically into the phenomenon (Heidegger, 2008); that is, act in the situation to Change and Continue.

In a context where every time the use of technology is wider, diversification, accessibility and what through it is increasing, personal interaction systems (Lefebvre, 2013) and the recognition of the forms that these relationships adopt have been relegated or have lost importance. This happens apparently because of the prevailing necessity to produce educational resources on a large scale and distribute them through the www, which are of different quality.

Through the event's ethics, developed by Alain Badiou (2004), we hold on to the simulation of truth to transform the production process of the digital educational contents that are in operation.

The epistemological basis of our proposal to improve the process, comes up from the proposals of the phenomenology (Hegel, 2017) and the Theory of life (Bergson, 2007), to generate innovation within education and, particularly, from the educational resources that change the teaching-learning processes.

According to (Sánchez-Mendiola, Moreno-Salinas, Bautista-Godínez, & Martínez-González, 2019) and (Bautista Godínez, 2019), one of the missing concepts in the educational processes and, in this particular case, in the knowledge conversion processes is the becoming-future, as a dialectic duality for innovating the digital educational resources. The concept of becoming-future, which is where it converges what it was, what it is and what it could have been, it opens the possibility for changing life. This is our starting point to resume and formulates the constitutive dimensions of the new production process of the mentioned UAPAs (see Figure 3a), integrating the concept of space and relation systems (see Figure 3b) to attend more student's needs and in a better way.

Teaching and traditional learning, the instrumental process that is currently happening and the stakeholders have been described in previous sections. To complete the triangle, we have recovered Henri Lefebvre's thoughts, about space production and relationship systems (Lefebvre, 2013). The space, according to this mentioned author, is produced from the social relations and their forms. The resources and the logic with which they are exchanged, take part in this medium. In short, the space is determined by the production concept derived from the productive forces. The forms of the relations are marked by the language in its wider sense, past and community's culture. The space can be static or in motion, it depends on the dialectic exercise. Dialectics promote circular forces fields that trigger innovation.

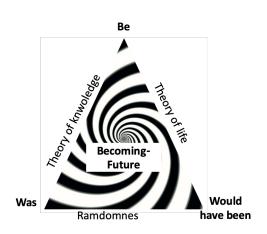


Figure 3a. Becoming-future concept (Sánchez, et al. 2019)

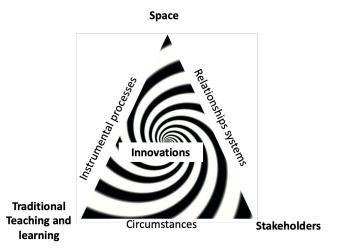


Figure 3b. Dimensions of the humanistic production process

The humanistic innovation process for the development of support units for knowledge

The production process is formed by one objective axis and a subjective one (see Figure 4). The first one corresponds to the instrumental mechanisms that generate results, which are currently operating.

The subjective dimension emphasizes the necessity of recognizing opinions or the perception of those involved (Hegel, 2017). Based on Hegelian thinking, to carry out the exercise of separation and grouping of perceptions corresponds to the reflection process. Begin the introduction from perceptions or opinions until find what originates the opinions is a consequence of an inductive-deductive process that is applied in the situation like we currently do. An opinion is an expression that is said immediately without having any reference. The perception is a proposition with a true judgment where the senses of an individual subject are involved.

The origin's opinion recognition opens the possibility of identifying the objective concept that originates from opinions. This allows us to identify the humanistic concept that will allow us to display the missing, damaged or new parts that have to create the new UAPAs production process.

The democratic dialogue allows the confrontation of ideas and the creation of new ones. Innovation is created in this way (Žižek, 2013). The cause of change to find why, that is, the origin's opinions are the Hospitality manners among different subjects (Derrida, 1998).

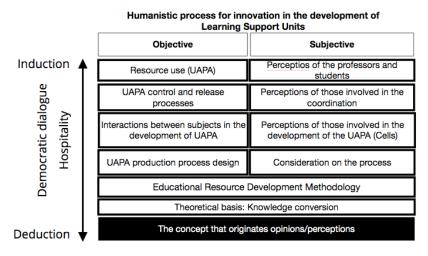


Figure 4. The humanistic innovation process for the developing support units for knowledge

Conclusion

The conversion process from tacit to explicit knowledge in a college environment where autonomy and academic freedom are promoted because it is from UNAM has developed

support units for knowledge, that reinforces college student's learning and in general of whoever uses those educational resources. The use of the UAPA by a large number of users and by the number of views, as revealed by the large numbers that we report here, pays for the perception that this type of resource reinforces learning, as those who were interviewed have referred. However, the production of these resources is still reduced.

To enhance the innovation of this mentioned process, we have held on to a simulation of truth for the continuous improvement of this process from the situation. This transformation has begun with the phenomenon recognition that has caused the learning objects production, where the main source is the professor's knowledge. The damaged form of the social relation systems that occur in everyday life is the phenomenon before mentioned. We have called it The Name of the Rose due to implications related to the unveiling of academic knowledge. This main finding has opened the door to determine the dimensions that will move the process which will improve the creation of this mentioned educational resource. With this, we have established the parts that shape a production humanistic process of these educational resources. The pending task consists in recognizing the conceptual origins that begin with a hard and enigmatic relationship among professors and pedagogical advisors. To achieve this recognition will allow changing the space and the social relation system.

References

Badiou, A. (2004). La Etica. Ensayo sobre la conciencia del mal. México: Herder.

Bautista Godínez, T. (2019). El lado humano de la ingeniería de sistemas: principios para la vida. *Revista Digital Universitaria*, 20(2), N/D.

https://doi.org/http://doi.org/10.22201/codeic.16076079e.2019.v20n2.a8

- Bergson, H. (2007). *La Evolución creadora* (2nd ed.). Buenos Aires, Argentina: serie perenne Cactus.
- Derrida, J. (1998). Adiós a Emmanuel Lévinas. Palabra de acogida. (M. Trotta, Ed.) (Primera en). España.
- Hegel, G. W. F. (2017). Fenomenología del espíritu (2nd ed.). México: F. de C. Económica.
- Heidegger, M. (2008). Introducción a la Investigación Fenomenológica. Sintesis.
- Lefebvre, H. (2013). *La producción del espacio*. (Primera en español). Madrid, España: C. Swings.
- León Martínez, J. (2017). Modelo de gestión del conocimiento aplicado a contenidos educativos digitales en instituciones de educación superior. Universidad Nacional

Autónoma de México. Retrieved from http://132.248.9.195/ptd2017/enero/0754450/Index.html

- Ikujiro, N., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press
- Polsani, P. R. (2006). Use and Abuse of Reusable Learning Objects. *Journal of Digital Information*, *3*(4). Retrieved from https://journals.tdl.org/jodi/index.php/jodi/article/view/89/88
- Sánchez-Mendiola, M., Moreno-Salinas, J. G., Bautista-Godínez, T., & Martínez-González, A. (2019). La analítica del aprendizaje en educación médica: ¿punto de inflexión? *Gaceta Medica de México*. https://doi.org/10.24875/GMM 18004801
- Sato, Y. (2007). Systems Engineering and Contractual Individualism: Linking Engineering Processes to Macro Social Values. *Social Studies of Science*, *37*(6), 909–934. https://doi.org/10.1177/0306312707076601
- UNAM, D. G. de E. (2019). *Agenda Estadística 2019*. México. Retrieved from https://www.planeacion.unam.mx/Agenda/2019/pdf/Agenda2019.pdf
- Žižek, S. (2013). Introducción. In Akal (Ed.), *Sobre la Práctica y la Contradicción* (p. 268). Madrid, España.

Acknoledgement

This work was supported by UNAM-PAPIIT IA303120.