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SECOND LANGUAGE LEARNING

UNIDAD 5. Las TIC en la enseñanza aprendizaje de lenguas extranjeras

GLOBAL CAMPUS
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1. Introduction

With the arrival of digitalization along with new methods of communication and interactive processes, knowledge transfer methods have been altered. New scenarios have arisen that affect modern training, didactic materials and the teaching/learning process. The new educational environment is characterized by the presence of an ever-growing number of computers, didactic multimedia material, internet resources, synchronous/asynchronous communication and e-learning platforms. While the introduction of these technologies into the classroom has certainly been helpful, it has not necessarily led to significant innovations in education.

This first unit looks into the concept of educational innovation and the factors that must be dealt with when incorporating innovative practices into the teaching/learning process.

2. EDUCATIONAL INNOVATION

The term innovation has two fundamental meanings:

As invention or discovery
A renewal, change, alteration or modification

As opposed to:

According to the Santillana Dictionary of Educational Technology, educational innovation can be defined as:

"*A change that is the result of an invention or a research and development process. A continuous process that leads to the creation of a new device, technique or procedure*"

With regards to education, Duarte concludes that innovation is "a change to a process which seeks to introduce novelties with a prospect for some improvement."

At first glance, a constantly changing educational environment seems obvious. Nevertheless, we must ask ourselves if the innovative capacity of ICTs (Information and Communication Technologies) can be found in these technologies. As we shall see in section 1.3, simply introducing new technologies into the educational context does not necessarily mean that educational innovation will occur. There are even differences in opinion among scholars who study innovation:

Romero de Tena argues, "Innovation means adopting a critical and thoughtful position. This position once identified must be adopted because of its value and legitimacy, rather than due to its novelty, short-term pragmatism or viability."

Carlos Fidalgo says that every innovation introduces new ideas that lead to change. These changes can be drastic (a change in procedure) or progressive (moderate changes applied to familiar procedures).

In either case, the goal is to make better that which has been changed. In other words, innovation has an improvement function

2.1 The study of innovation

Efforts to establish the defining factors of educational innovation fall into two working schools of thought.

A. Focused on the study of the potential and inhibiting factors to change, especially educational changes and those specifically related to ICT (Information and Communication Technologies). Studies tend to focus on identifying variables related to management, or demands that teachers face in innovation.

B. The study of external factors. The primary factors are:

- ICT Policies
- Coordinator and leadership in ICT
- Infrastructure, school organization, educational staff training and relationships in the working environment

Duarte falls into the first school of thought. He compares innovation to change events and highlights the following characteristics of change:

- Change is a process not an event. It is very important to consider the temporal factor.
- Changes are carried out by people with their own individual characteristics, interests, motivations and attitudes.
- Change can be better understood in operational and implementation terms.
- Change serves to satisfy particular needs.
- In any change, what is really important is the people not the project.

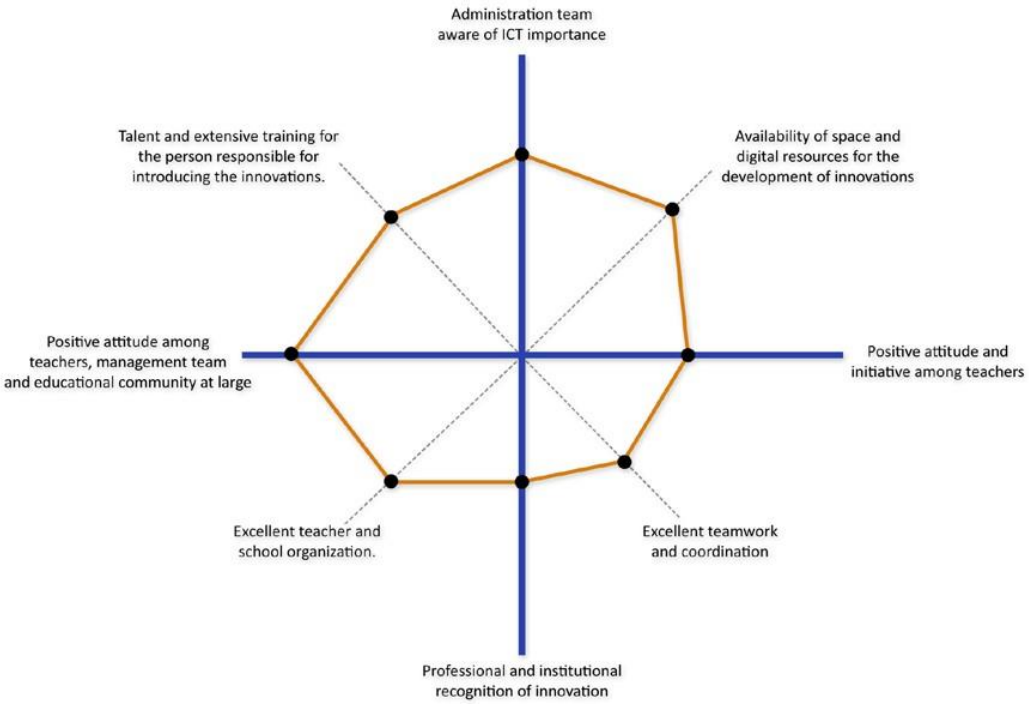
Duarte also points out that change is not a controllable process with predictable results. Change depends on implementation, context and duration (time). In addition to these three factors, we must also keep in mind that:

- Change will not occur unless there is a further rapprochement of educational institutions to the needs and demands of the Information Society.

- Change requires a new type of educational organization that in some aspects needs to be radically different to the current system.
- A flexible organization that is open to non-traditional solutions works best.

The theories of De Pablos, Colás and González (2010) are more closely aligned with the second school of thought. These authors point to the following factors in the educational innovation process with regards to ICT:

- The administration team becomes aware of the importance of integrating ICT at the institution.
- Availability of space and digital resources for the development of innovations.
- Teacher responsibility and initiative. Team work and coordination.
- Professional and Institutional recognition of innovation.
- Excellent teacher and school organization.
- Positive attitude among teachers, management team and educational community
- Talent and extensive training for the person responsible for introducing the innovations.



As we see in the graphic, the factors most highly rated by importance are “availability of space and digital resources for the development of innovations” (3.7 on average) and “positive attitude among teachers, management team and educational community at large” (3.7 on average as well).” And at the other end of the scale, we see “professional and

institutional recognition of innovation" (2.67 on average) and "excellent teamwork and coordination" (3.0 on average) as the least valued factors.

In spite of the results of this study, each of these factors can be important itself in instilling the educational innovation process, but at the top of the list is "good teamwork and coordination." Context in innovation is critical, and for this reason alone it is important to remember that when studying successful cases of educational innovation, we must consider the context in which they took place. The three authors all consider the study of educational innovation detached from its specific educational context to be inefficient.

2.2 Internet

The integration of the Internet in education is an innovation that requires profound changes in the role of the teacher, students learning processes and schools and classes administration.

Gallego (2005) postulates that in order to succeed in educational innovation, action at four different levels is necessary.

1. Official structure. The Ministry of Education and the education departments of regional administrations. These organisms must be committed to providing resources to each school on an annual basis. They should also be expected to install network connections, organize teacher training, promote widespread learning, orient the schools towards the adoption of technologies, and increase the budget for materials.

The study *España 2012: VI Informe Annual sobre el Desarrollo de la Sociedad de la Información en España* shows that every Spanish autonomous community developed some kind of project to introduce new technologies into educational centers. The plans included the development of telecommunication infrastructure, educational web pages, platforms with educational resources for students and parents, and internal networks for the inter-connection and administration of schools. These measures have also included ICT training for everyone involved. In some cases, financial aid for the purchase of laptops for teachers and students has been provided.

2. The management team of the institution must accept that a new situation and paradigm are being introduced. A shift in focus will be required of them along with the involvement of the entire educational community. It is up to the administration team to plan the actions needed to make each educational innovation a success. Each team member must be given specific goals and targets with a detailed timeline of when each is to be achieved.

3. Technical infrastructure. There are various levels of equipment sophistication that can be implemented gradually.

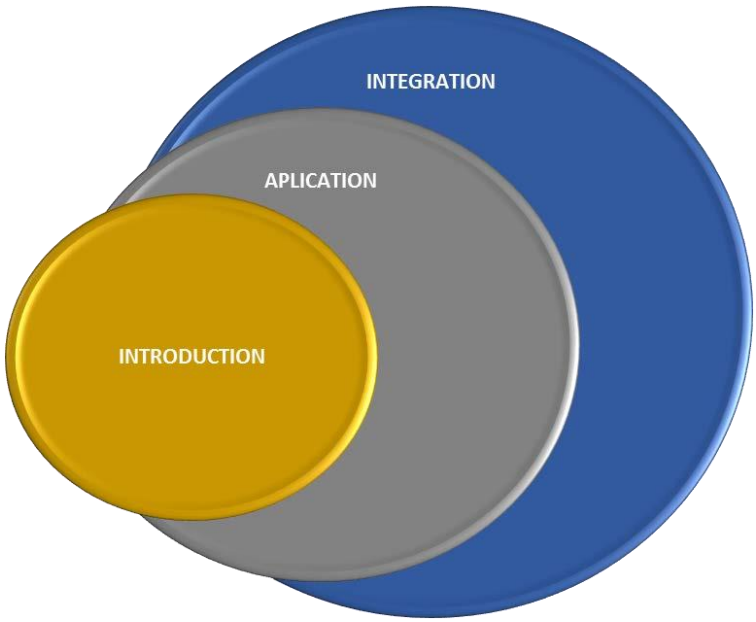
Having all the equipment running at optimal conditions from the very beginning should not be expected. Nevertheless, some technological resources (such as the internet) are indispensable and necessary from the start.

In the case of the internet, the network should be completed with a sufficient number of connected computers. Furthermore, the software to be installed on them must be considered.

4. Teachers. The positive attitude of teachers towards innovation is indispensable when facing a paradigm change. Each process of change can be difficult and complex, while the introduction of the internet into the classroom can completely transform the teaching/learning process.

Teaching training sessions must be planned, adapted and scaled, with the focus on the continual improvement of the teachers

The three levels of ICT implementation in the educational center (de Pablos and Colás):

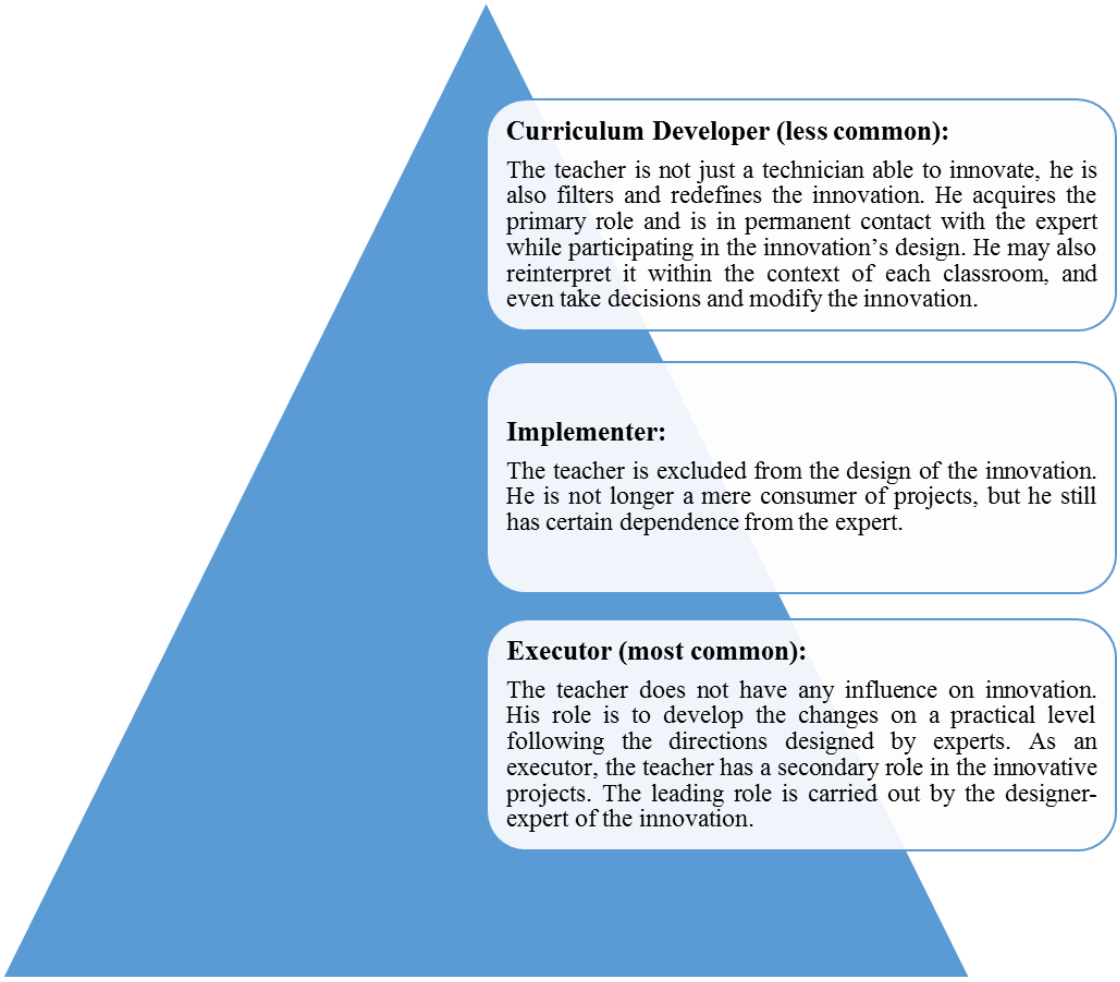


Each level represents a different approach to incorporating ICT into educational centers.

The highest level possible is that of integration. It is defined as the full incorporation of ICT at both an institutional and instructional level. In order to reach “integration” an institution must first have passed through the previous two levels.
Introduction level: implies the provision of equipment and familiarizing the teachers and students with its use.

Implementation level: once the use of the equipment has been mastered, a phase of discovery can begin in which its pedagogical uses in various of fields of study can be explored

The teacher's role in educational innovation (Tejada)



3. THE PEDAGOGICAL ASPECTS OF INNOVATION

The age of free access and availability of new technologies (PCs, laptops, internet, wifi, interactive whiteboards, tablets, etc.) in European schools is upon us. However, we must ask ourselves to what extent they are being used to further education, and if they are having a positive impact on the student learning process. We must also consider the improvements that we are achieving to the quality of teaching.

3.1 The most common uses of ICT in the classroom

One of the most remarkable yet most discouraging conclusions drawn from research related to pedagogical innovation is that although there has been a great increase in the technological resources available at schools, the teachers methodologies have not changed significantly.

The BECTA (2007) and the Plan Avanza2 reports show that a high percentage of teachers are ICT users outside of school. They use them with tasks related to classroom planning.

The ICT related tasks were above all related to:

- Word processing used for carrying out educational programs.
- The preparation of exercises and activities to be completed by the students.
- Multimedia presentations
- The search for information on the web
- E-mail contact with colleagues
- Administrative management: schedules, bureaucratic forms, reports cards, etc.

However, other kinds of highly complex tasks that require great training and skill, such as those related to planning are not being carried out.

Some examples:

- Development and production of digital didactic materials such as Webquests and edublogs, along with the creation of other educational resources such as animations, interactive activities and videos.
- Collaborative work with other colleagues in other parts of the world through network resources, focused on the development of team projects among schools and classrooms.

The high percentage of teachers who take advantage of ICTs outside the classroom (for administrative management and planning) stands in stark contrast to the low percentage who use them in the classroom.

This data must, however, be qualified as there are considerable variations in the data among European countries (European Commission, 2006).

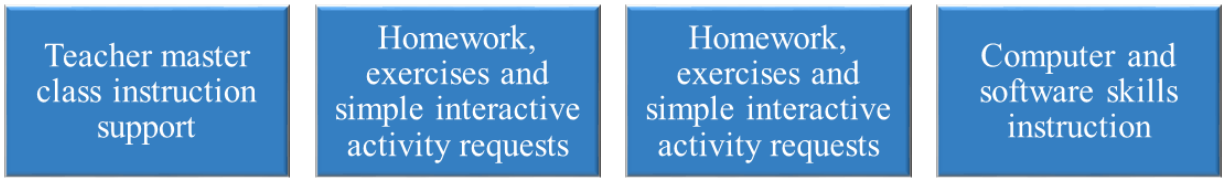
The previously mentioned reports emphasize the fact that these technologies, when used at all, are used in a traditional manner. These kinds of teaching methodologies and practices lead to a conservative rather than a socio-constructive teaching approach.

The conclusions are similar to those drawn from previous studies, i.e. the educational model employed by teachers and students uses ICT simply as a transmitter of information or a presentation tool. This is not a relevant innovation or modification to traditional teaching methods.

In the traditional model, the computer is employed as a tool to help students gather information, do exercises and establish interactive relationships. Each of these uses has the same objective -- to teach specific topics which can later be evaluated and graded.

As we pointed out earlier, the presence and use of ICT in the classroom does not in itself lead to innovations in teaching and learning methodologies.

Principal didactic uses of ICT in the classroom (Area, 2008):



Area (2008) argues that pedagogical practices dealing with technology should mainly be oriented toward the development of basic digital competencies related to the treatment of information.

3.2 Digital competencies as a pedagogical reference

The LOMCE defines ICT for pre-school and primary students as follows:

> *La incorporación generalizada al sistema educativo de las Tecnologías de la Información y la Comunicación (TIC), que tendrán en cuenta los principios de diseño para todas las personas y accesibilidad universal, permitirá personalizar la educación y adaptarla a las necesidades y al ritmo de cada alumno o alumna. Por una parte, servirá para el refuerzo y apoyo en los casos de bajo rendimiento y, por otra, permitirá expandir sin limitaciones los conocimientos transmitidos en el aula. Los alumnos y alumnas con motivación podrán así acceder, de acuerdo con su capacidad, a los recursos educativos que ofrecen ya muchas instituciones en los planos nacional e internacional. Las Tecnologías de la Información y la Comunicación serán una pieza fundamental para producir el cambio metodológico que lleve a conseguir el objetivo de mejora de la calidad educativa. Asimismo, el uso responsable y ordenado de estas nuevas tecnologías por parte de los alumnos y alumnas debe estar presente en todo el sistema educativo. Las Tecnologías*

de la Información y la Comunicación serán también una herramienta clave en la formación del profesorado y en el aprendizaje de los ciudadanos a lo largo de la vida, al permitirles compatibilizar la formación con las obligaciones personales o laborales y, asimismo, lo serán en la gestión de los procesos.

3.3 Pedagogical Model

With regards to the development of digital technologies and competencies, Area (2008) proposes a basic model founded on the following principles:

- Train students to reconstruct and make sense of the vast amount of information at their fingertips through the media. Develop competencies in the wise use of this information to be employed in a critical and ethical way.

- Develop an educational methodology that challenges the textbook monopoly as the only source of knowledge. Encourage students to search for information using a variety of sources and technologies. Approach data with a critical and reflective spirit.

- Assign problems/projects that are interesting and meaningful. Students should be made to articulate working plans and develop the necessary actions using technology to produce satisfactory answers and results. Through a diverse array of technological resources, students should learn to communicate and express themselves.

- Organize tasks and activities that require the use of technology and the development of collaborative learning procedures among the class, and with other classrooms around the globe.

- The teacher must take on the role of activity organizer and supervisor, rather than that of a transmitter of processed information.

3.4 Proposal of activities

To conclude this lesson, let us mention a list of activities proposed by Manuel Area. Each of them is designed to develop digital and information competencies.

Educational activities for the development of information comprehension and search skills:

- Thematic searches: on a specific topic using web browsers and links in specialized web pages.

- Access and database query on specialized web portals.

- Encyclopaedia access: Internet dictionaries and other reference tools on reference websites (Wikipedia, Webster, RAE, etc.)

- Information from companies, institutions, associations or individuals through their officialwebsites.

- Webquest, treasure hunts and related tools for search and information analysis.

- Online interviews with professionals.

Educational activities for the development of skills related to personal production and the public dissemination of knowledge.

- Write personal papers and other kinds of documents in which the use of word processors is involved.

- Create a library with digital documents. The student should make a list of links.

- Write a text, or create a glossary, an encyclopaedia or a dictionary using wikis.

- Create a self- learning diary using a blog or a word processor.

- Create videoclips with software such as Video Editor, MuveeNow, Nero or Windows Movie Maker.

- Create multimedia documents or databases with software for audiovisual presentations.

- Publish and disseminate personal projects through blogs, personal web pages or community websites.

- Publish digital files on the internet using shared content web pages (YouTube, Flickr, Slide Share, etc.)

- Perform public exhibitions of projects using the interactive whiteboard.

- Develop educational activities for the promotion of social interaction and communication skills.

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