

From ICT to the LKT

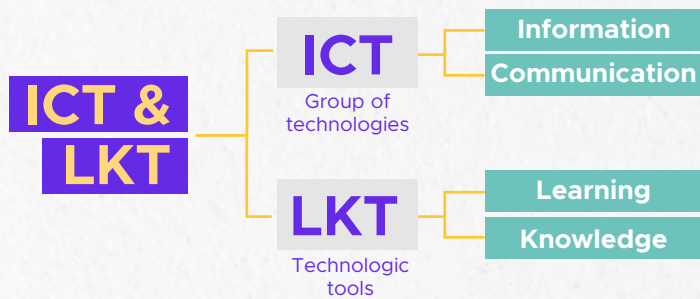


How to take technology to the classrooms?

Information and Communication Technologies -ICT- are increasingly present in teaching and learning processes, especially after the COVID-19 pandemic, where the forced leap to distance education massified the need to generate digital skills for teachers, students, and their homes. Technological innovation and democratization in the use of the Internet is transforming the way educational materials are generated, the way school content is distributed, the way each student engages with the materials, and the processes used to assess the results of education.

However, the inclusion of ICT in educational spaces also represents an important challenge, since it requires not only professionals equipped with methodologies, skills and abilities that facilitate their use for learning, but also implies changes in study plans and programs and in general in all educational processes.

In the search for methodologies that guarantee quality in the result of the teaching process, Learning and Knowledge Technologies (LKT) appear, these guide the use of information and communication technologies towards pedagogical purposes, putting technological tools at the service of knowledge acquisition and learning.



Source: Own creation

LKT's go beyond the development of digital skills for the functional management of ICT's or the simple use of computer platforms. These resignify teaching and learning, focus the active process on the students, giving a new conception to the functions of the teaching staff, who now occupy the role of facilitator. Researches have shown that one of the most consistent benefits of LKT's is their impact on student motivation and focus¹. This result is associated with the dynamic and interactive possibilities that LKT's have to present concepts (such as using animations, performing simulations, etc.)

LKT's are part of a innovative methodology based on the integration of digital environments and personalized study environments that offer big possibilities of adapting technological tools to the needs of the educational process.

1. Parra Acosta, H., López Loya, J., González Carrillo, E., Moriel Corral, L., Vázquez Aguirre, A. D., & González Zambada, N. C. (2019). Las tecnologías del aprendizaje y del conocimiento (TAC) y la formación integral y humanista del médico. SciELO, 8(31)

Tech companies like Amplify and Knewton have been digitizing textbooks and creating content based on gamified learning (from games), while others like Coursera, edX and Khan Academy have sought to revolutionize the delivery of education through massive open online courses. (MOOC). Next, we present 4 trends in ICT innovations for the educational process:

1. Virtual reality in education:

This technology allows to learn while interacting with a 3D world. One of the main uses in the classroom is to take more students on virtual field trips to places that otherwise wouldn't be accessible.



2. Artificial Intelligence (AI) and automated learning:

AI is used in schools to automate key activities such as the grading of exams and the analysis of areas that need improvements. It is also used to better personalized learning between students, especially those with special needs.



3. Gamification or ludification:

The use of ludic strategies has been historic in education, especially in the first levels of learning. However, the mass use of digital devices allows to blend gamification with training forms such as eLearning (online learning)



4. Blockchain Technology (DLT):

It is used in massive open online courses (MOOCs) and online portfolios to verify skills and knowledge. This technology solves authentication, scalability and cost problems of eLearning agencies. In addition, it can help students publish their achievements during the job searching phase.



1. Reading or virtual notebook

PDF, Cuadernia, Slideshare, Evernote



2. Knowledge organisers

Freemind, CmapTools, bubbl.us, AllSides, EmbraceRace



3. Presentations

Prezi, VidoScribe, PowToon



4. Cloud storage

Dropbox, OneDrive, Mega



5. Videos

YouTube, Animoto, Blendspace, Vimeo, Edpuzzle, TED Ed



6. Web pages

Blogger, WordPress, Blogia, Wix



7. Online classrooms

Redalumnos, Edmodo, Tynker, Google Classroom, Zoom, Webex, and Meet



8. Information management

Blendspace, symboloo



9. Collaborative participation

Padlet, Facebook, PearDeck, FlipGrid, Storybird, Prodigy, Anchor, ScreenCastify, PollEverywhere, Explain Everything Whiteboard, Menti Meter.



10. Graphic material creation

Piktochart, Canva, ComicLife, Gloster



11. MOOC Courses

Coursera, Miriadax, Centrum, edX, khan academy



12. Gamification (Learning with games)

Kahoot!, Minecraft Education Edition

Source: Own creation

In the digital age, each student is required not only to use, but to take advantage of ICT's and LKT's. That is why it is important to increase the technological training of teachers and trainers and to promote access to technological resources in all spheres of society.