

IO3 - NATIONAL CONDITIONS FOR INTEGRATING ICT IN EDUCATION – "SPAIN"

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- National Framework
- Innovation pathways
- SWOT Analysis
- Recommendations for effective integration of ICT in the teaching and learning processes
- Conclusion





National Framework





Erratic educational policies for the implementation of ICT in the classroom (no long-term strategy)

ICTs in the improvement of education within the current Spanish educational law (LOMCE) is:

- limited to rhetoric in the legislative text
- not articulated in practical interventions considering the different dimensions of this problem





Integration of ICT infrastructure and connectivity in schools focuses on equipment rather than methodologies

Suspension of the Spanish Ministry of Education's *Escuela 2.0* Program

absence of a unified educational policy and investment plan at both state and regional level across the national territory.





Educat program – adaptation of *Escuela 2.0*

- the government of Catalonia continues to motivate it's implementation
- does not provide budget
- does not cover the totality of the region's centers





Innovation Pathways





Global innovation project of the SINS Cardener

- intensive use of ICTs
- methodologies and materials that take advantage of internet resources
- creation of a digital personal learning environment
- ICTs used to achieve a more fine-grained approach to inclusive and personalized education





Mobilitzem la Informàtica (Mobilise computing)

- optional subject in Informatics of the 4th year of compulsory secondary education
- designing and programming an app for mobile devices integrating a entrepreneurial component.
- group work to create a solution to a problem identified by the group
- structured along the following lines: multimedia creations, publication and dissemination of content, and tools for communication





Summem.cat project of the Escuela Pia de Catalunya for interdisciplinarity in the classroom

- cooperative structure of work, making use of communicative tools
- problem-based, project-based, and service learning
- integrates research
- Takes at least 50% of school time in pre-school and 25% in Primary, Secondary, and Professional Education





- Educational project in Escola Arenal de Llevant
- based on the double axis of science and technology
- places Science and LKTs at the backbone of learning
- students do not have individualized textbooks
- the main methodology of the center is projectbased
- students have to learn to answer their own questions





• World Mobile City Project

- collaborative project of mobile georeferencing
- managed by teacher networks, involving 70 centers in Catalonia and the Valencian Country, the Polytechnic University of Catalonia and more than 5000 children and young people
- allows participants to physically discover the city and locate any point by combining classic media (charts, maps) with the latest technologies (Internet mobile, geolocation, QR codes, augmented reality)





ICT Workshops in Escola Projecte

- series of workshops with videogames
- game-based learning methodology
- LKTs in the service of curricular contents and promoting competences and values (creativity, teamwork, problem solving and interest in technology)



INNOVATION PATHWAYS - RESOURCES



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Entra en Tiching



Todos los recursos educativos que necesitas para aprender y enseñar mejor



ORGANÍZALOS

COMPARTE EXPERIENCIAS

ENCUENTRA RECURSOS Todos los recursos educativos, clasificados por Clasifica tus recursos en las carpetas de la cursos y asignaturas, para enseñar y

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biblioteca y crea secuencias didácticas y aprender mejor. libros digitales con ellos.

Participa en los grupos y en las clases para intercambiar dudas, experiencias y recursos con otras personas.



SWOT analysis



SWOT ANALYSIS (TEACHER FOCUS)

DECODE

Strengths

- familiarity with complex learning situations
- willingness for innovation and adaptation
- Expert teachers able to train their peers
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Opportunities

- Willingness to integrate ICT in educational center by some schools managers
- Existence of networks of teachers.
- Available resources for continuous training.
- Digital competence as a strategic focus of European Policy

Weaknesses

- Lack of temporal and financial resource for continuous training.
- Resistance to methodological change/innovation.
- Lack of knowledge about OER and FLOSS
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Threats

- No long terms strategies for policy and investment.
- Ever changing social and technological context.
- Rapid obsolescence of existing infrastructure.
- Inexistent accreditation mechanisms for innovation practices/non formal training



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Recommendations for effective integration of ICT in the teaching and learning processes

Infrastructural dimension





National Decision makers

School Managers

- Increase investment in infraestructure
- Choose open source solution and OER

- open management paradigms for managerial and administrative activities
- improvement in ICT infrastructure (e.g. BYOD) and us of OER FLOSS





Recommendations for effective integration of ICT in the teaching and learning processes

System dimension



RECOMMENDATIONS - SYSTEM DIMENSION

National Decision makers

- reinforcement of skills and competence such as: critical thinking; collaboration; digital in the curriculum
- integration of ICTs as an methodological innovation

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- Construction of networks to support ICT projects among teachers and other practitioners
- Teachers' training and accreditation

School Managers

- innovative projects and pedagogic practices around ICT usage
- informal networks for teacher collaboration
- personalized education and diversity awareness



Teachers

promote active learning and project, problem and case-based learning

DFCODF

- simulation and visualization methods provided by computational technologies
- capacitating students for autonomous lifelong learning
- foster students digital competence





Conclusions





Investments and clear policies are necessary at a decision makers level.

- School Management-leaders should promote ICT integration in schools
- Any teachers' training on ICT should consider:
- instrumental and methodological use of ICT
- promote students' problem solving, communication or creativity skills
- active role in the production of teaching contents
- capacitating teachers to employ active learning and collaborative learning methodologies
- online teamwork skills among teachers

