אוניברסיטת תל-אביב

מיטל IUCEL

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עולם המידע הפתוח
הוראה מתוקשבת בחינוך הגבוה
הכנס הארצי השנתי התשיעי של מיט"ל ע"ש פרופ' נחמיה לבציון ז"ל

אלף כיתות משתתפות במיזם לעיצוב כיתת הלימוד העתידית – iTEC

דב וינר

iTEC – Designing the future classroom

iTEC

iTEC

Designing the future classroom

- iTEC (Innovative Technologies for an Engaging Classroom) is a four-year, pan-European project focused on the design of the future classroom.

European Schoolnet

JRC Scientific and Technical Reports

School's Over: Learning Spaces in Europe in 2020: An Imagining Exercise on the Future of Learning

Authors: Riel Miller, Hanne Shapiro and Knud Erik Hilding-Hamann
Editors: Yves Punie, Kirsti Ala-Mutka and Christine Redecker

http://ipts.jrc.ec.europa.eu
http://www.jrc.ec.europa.eu

What is iTEC about?

- Previous initiatives on designing the future classroom have often been too far removed from for the realities of everyday classroom practice and have failed to engage teachers and learners.
- Ensuring widespread take up of earlier future classroom scenarios has also frequently been a real challenge because of a failure to acknowledge that the educational reform process in schools cannot move at the same rapid pace as technological developments.

iTEC will:

- **Act as an *ideas lab*** bringing together policy makers, researchers, technology suppliers and innovative teachers to jointly develop ambitious scenarios for the future classroom to influence educational reform processes at both national and European level.
- **Test and validate** these scenarios in the largest pan-European school pilot involving ICT yet undertaken
- **Involve a high-level group of decision shapers** (including senior advisers on ICT in each Ministry) to produce a set of recommendations for policy makers in Europe and help ensure large-scale adoption of iTEC scenarios.

Who is involved?

- iTEC partners include 27 organisations from 18 countries including
  - 15 Ministries of Education
  - leading ICT vendors
  - innovative small and medium enterprises
  - technology-enhanced learning researchers
  - teacher trainers and experts in school validations and pedagogical evaluation.
- The project is coordinated by European Schoolnet, a unique network of 31 Ministries of Education in Europe.

How does it work?

- iTEC will produce meaningful pedagogical scenarios for the future classroom and, from these, derive learning activities and new approaches to assessment that engage teachers, learners and stakeholders outside the school.
- In five project cycles, iTEC will then test and thoroughly evaluate these scenarios with schools in different countries.
- A key aim is to research the skills and competences needed by teachers in the future classroom and equip teachers, both within and beyond the project, to implement project scenarios.

Technical Vision

"Learners and teachers will be able to access information and resources which will allow them to plan and participate in iTEC learning activities making use of the technologies they currently have and providing them with additional applications and resources including Widgets, content and access to people and events that can support learning. These tools and resources will be accessed through a secure personal user interface or "shell" which will allow the learners, teachers and others involved in the learning process to integrate the range of tools, content and information that meets their educational and learning requirements.

Various shell technologies will be available to users and each shell will have access to the same selection of tools and resources made available through a collection of registries including an "iTEC Application Store" allowing users to find new Widgets and integrate them into their shell. Individuals or organisations providing tools and content or giving access to information on learning events or people available to support learners online will be able to register this information and add these resources using a tool called the "iTEC Composer". The iTEC Composer will also allow local users e.g. school teachers or ICT Coordinators to identify which technologies they already have available to them including hardware and proprietary tools so that the additional iTEC resources made available are locally compatible. A supporting services called the ***"Scenario Development Environment" will provide resource recommendations*** *via the composer based upon iTEC learning activities, making use of resources available locally and through iTEC registries."*

A "Shell" technology

What technology is being used?

- iTEC is taking place at a time when teachers and learners already have access to a loose and rapidly expanding collection of ICT tools and services.
- The iTEC technology approach aims to make the technical components (people, tools, services, events and content) required by the scenarios, interoperable and discoverable.
- This way teachers can more easily select and combine relevant components tailored to the future classroom scenario of their choice.

Technical developments

WP7 **Shells**

WP8 **Widgets**

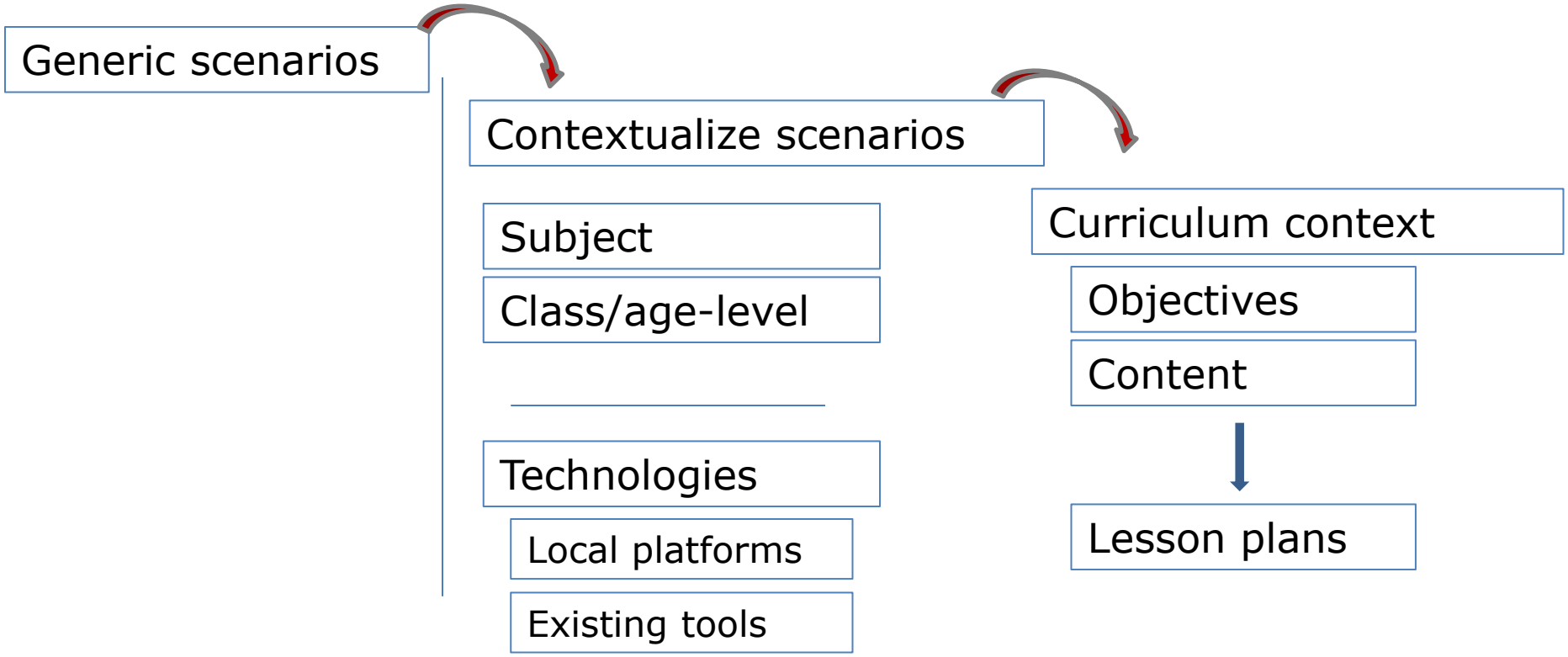
WP9 **Registries**

WP10 **Recommendations**

Potential technologies to be integrated in the iTEC Shell

Synchonous communication/collaboration	Skype, Flashmeeting, iChat, MSN Messenger, Google Talk, Google Wave, SMART Bridgit, SMART Classroom Suite - Synch
Asynchronous communication/collaboration	Google Calendar, Google Docs, Google Wave, Gmail, Delicious, FriendFeed, ThinkTank, VoiceThread, eLogbook, Liferay portal, WordPress.com, Twitter, Little Sister, XoWiki, Nextspace, LinkedIn, XING, myAnnotations, SLIDESTAR, BSCW, Towards Maturity
Learning domain or learning planning services	LAMS, CbKST, Your Preferences, CCPLE
Authoring tools	LECTURNITY, Dynamic PowerTrainer, SHAME, Conzilla, CbKST Domain Map Editor, author42, LeMill, Hot Potatoes, Promethean ActivInspire, SMART Notebook, CMaptools
Enabling Services: brokerage	ObjectSpot, LRE portal, ARIADNE portal, Persons & Events registry
Learning Management System / Personalised Learning Environments	FESTO, Moodle, SJTU E-Learning System, Blackboard, .LRN, PAU, LAMS, Its Learning, Fronter, SCORM player, IMS Common Cartridge player, IMS QTI player
Interaction devices	Interactive Whiteboards / multi-touch interactive tables and surfaces, responders, blue tooth,
Lab (physics, chemistry, biology) devices	Sensors, detectors, data logging
Location aware applications	Mobile map apps, bus timetable apps, location finders, contextual info apps, FourSquare, Gowalla, urbanspoon, CauseWorld, Panoramascope
Fun Camera Applications	Instagram, Gooey Faces
AR apps	Peaks, Star chart, Layar Reality Browser
Games	TouchPets, Club Penguin
Smart & Cool Toys	Brio Network, Robosapien, Lego Mindstorms NXT2.0
Stuff	electronics kits, RFID kits, build-your-own-robots

from Scenario to the Classroom



What will be the impact?

- ITEC aims to develop more meaningful visions and scenarios for the future classroom by putting in place a user-centred design process and rigorous testing methodology.
- All learning activities and proposed designs for the future classroom will be co-developed with teachers and will be validated in large-scale pilots in order to determine whether they can have the potential to be widely adopted by schools in Europe.
- The direct involvement of 15 Ministries of Education in scenario development, school piloting and dissemination activities will also ensure that iTEC results can be adopted by policy makers in different countries and in schools that have reached different levels of ICT implementation and use.

For further information

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