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Emerging Technology Landscape Workshop



HoTEL Holistic Approach to
Technology Enhanced Learning

Innovators – Opinions – Perspectives

WP1| D 1.1.1

Emerging Technology Landscape Workshop

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Executive summary

This document presents a report on the HOTEL Emerging Technology Workshop, which was organised on the 28th of November 2012 as a preconference workshop of the Online Educa Berlin Conference, in Berlin, Germany. The title of the workshop was “Societal challenges, policy priorities, and Technology-Enhanced Learning (TEL): proposing a TEL research ‘relevance test’”: the idea of the event was to look at the emerging landscape of TEL research not from a technological point of view, but starting from the fundamental concern which is the relevance of what TEL research is doing and can do to contribute to a better education in Europe. The workshop was co-organized by Fabio Nascimbeni (MENON), Claudio Dondi (Scienter), and Daniel Burgos (Unir).

The event gathered some of the most important Technology Enhanced Learning (TEL) support and foresight actions of recent years, with the aim of promoting networking and knowledge sharing in the field of TEL around the issue of TEL research relevance. The starting point for the workshop was that TEL research does not seem able so far to reach the relevance level which is needed to transform educational systems, despite its recognised level of excellence and the strong efforts that funding agencies – especially the European Commission – are deploying.

Representatives from a number of FP7 Support Actions (HOTEL, TELMAP, we.learn.it), of LLP projects such as VISIR, of large TEL implementation projects such as Open Discovery Space, of studies such as MATEL, of associations as TELSpain, of Networks of Excellence such as GALA and STELLAR, engaged in a discussion on how to join forces around in designing a forthcoming roadmap, and to possibly agree a roadmap among the participating projects “towards a federation of efforts to support and foster the relevance of TEL for a Europe of knowledge”.

As result of the workshop debate, participants agreed on the importance to work on a “TEL research cartography” as a possible approach aiming to make TEL research more relevant to the society. Such cartography would need to engage all relevant stakeholders and to embed the different top-down and bottom-up perspectives that are needed; further it must have a high level of visibility to reach the desired impact. The exercise would help to strengthen the role of TEL research in support of education processes, broadly addressing the problems of educational research in relation to its recognised problems, such as the lack of cumulativeness and fragmentation. Furthermore, it would dynamically represent current initiatives in the TEL field as a conceptual mapping, including existing research efforts on TEL with a button up perspective.

The last session of the workshop was devoted to launching and discussing the eTernity initiative from CEN, focusing on developing European standards for Textbooks Reusability, Networking and Interoperability.

1. Introductory presentations

1.1 The HoTEL idea of a TEL relevance test

After welcoming the participants, Claudio Dondi (Scienter) presented the rationale behind the idea of a “TEL relevance test”, starting with the definition of TEL that is commonly used in research and closely related to the work carried out by different Networks of Excellence (NoEs) funded by the EC in the last years. Those NoEs have proposed a number of research agendas, but two big questions remains: to which extent are those agendas really relevant to policy makers and practitioners? And how does TEL help solving problems matching the interests of practitioners and policy makers? To answer these questions, a TEL relevance test is needed. While answering these questions, HoTEL will be working to make research agendas more relevant for all relevant stakeholders.

Next he introduced the HOTEL project with its motto “There is always a room for innovators”, and he briefly presented the project partnership (more information at www.HoTEL-project.eu). The issues addressed by the project are three: 1) TEL research so far focused mostly on technologies developed «ad-hoc» for learning, while it was somehow “surprised” by the uptake of generic technologies also in the world of education and informal learning, 2) bottom up innovation in TEL is not yet sufficiently considered by research and 3) the influence of available learning theories on TEL practices is not sufficiently analysed. The ambition of the HoTEL is to reduce the time of innovation adoption within TEL contexts, by proposing the HoTEL innovation cycle, as a way to speed up innovation mainstreaming by involving relevant stakeholders in all stages of the cycle. The designed cycle will be piloted through Learning Lab Exploratoriums in three real environments (focusing respectively on Higher Education, workplace learning and individual professional learning).

1.2 The European Commission Vision

Liina Munari, from DG Connect of the European Commission and Project Officer of HoTEL, started by saying that recently all TEL-related projects have been assigned to the EC Unit G4 “Skills, Youth and Inclusion” based in Luxembourg. The idea of this unit is to break the silos of research, providing a common funding scheme for all Lifelong learning areas. Given the important budget spent on TEL over the last ten years, she stated that we have now the competences to put people together with appropriate funding instruments and that there is a high political interest to make this work. Next she presented the Horizon 2020 programme which is currently under preparation: TEL will be considering within the “Leading technologies and Societal challenges” part, although budget reductions are also being considered. She briefly presented the open call for proposals for Challenge 8. Objective 2, and the new EC policy framework based on the press release of November 20th “Rethinking Education Technology”.

She continued by noting that education is a priority investment area for the EC, and that technology is providing new forms of interaction for learning. Nevertheless, we kept hearing some questions related to:

- The long time needed for the expected changes to happen. The TEL community was probably ahead of our time and should consider the participation of learners with more attention.
- The role of innovators within research. Research is fundamental but innovation is more related to the exploitation of research results. Thus, that part should be stressed and stronger collaboration in that regard is need.
- Strategic thinking by the EC. Is it important to bring people from different initiatives to work together and to keep track on the results of their interaction.

With this in mind, from the EC perspective we need two things. First, we need rigorous evidences of what technology can bring to learning. Second, we need to show evidence of learners' engagement through TEL: technologies able to support learners' engagement exist (such as Game based technologies and learning analytics), but we need to be cautious about barriers and expectations. We would also need more pilot studies, more streamlined prototyping along different pilot lines, demonstration and testing.

Mrs Munari welcomed the idea of the TEL relevance test and commented that it seems appropriate to tackle the issue by the points of view of the different projects that have been/are being working in the field. Nevertheless, in order to build a meaningful “TEL innovation ecosystem”, we need to keep the following questions in mind: Which are the necessary elements of the ecosystem? Which are the framework conditions? What can we change and what we cannot change? How to reach an “organic growth” of TEL?

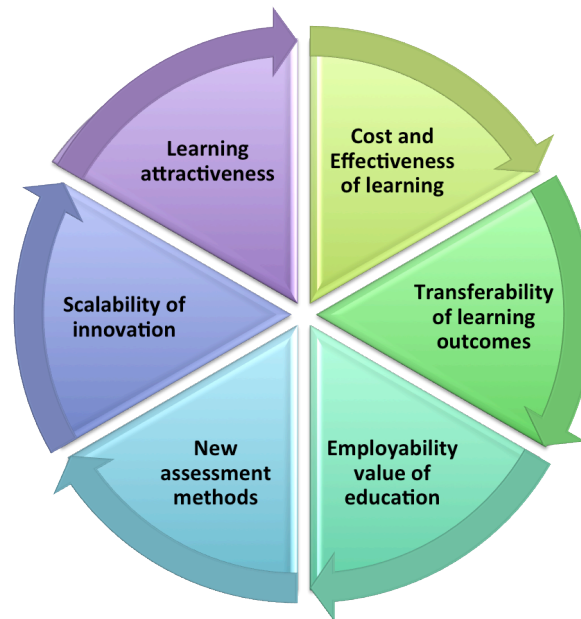
2. TEL research: how relevant to EU policy objectives?

The debate tackled the issue of the relevance of TEL research by connecting it with a number of policy objectives of education. The following picture, developed within the STELLAR Network of Excellence, guided the discussion.

The discussion went along six policy objectives:

- Cost reduction and effectiveness of learning
- Transferability of learning results across lifelong learning sectors and contexts
- Employability value of Education
- New assessment methods
- Scalability of innovation
- Learning attractiveness.

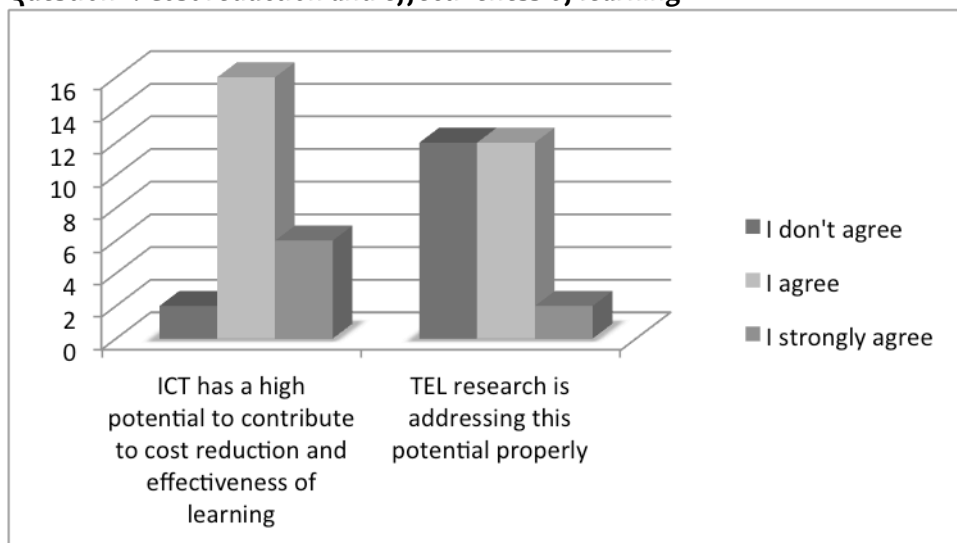
For every policy objective, two questions were asked to participants: first, whether ICT has a potential to contribute to achieving that objective and, second, whether TEL research is addressing the potential properly.



The session utilised the HIST real-time response system, kindly offered by the Faculty of Technology of the Sør-Trøndelag University College (<http://www.histproject.no>), where participants expressed their choices through their mobile devices.

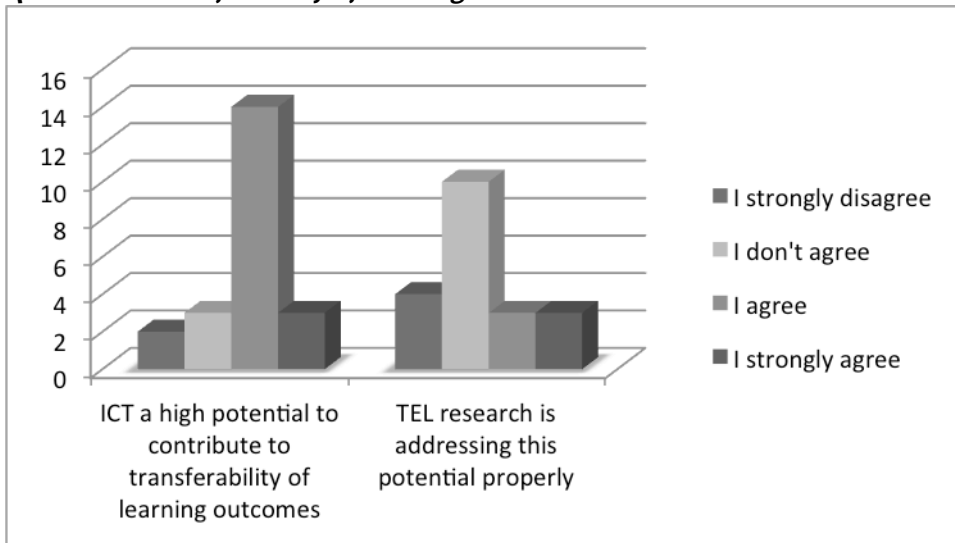
As it appears from the graphs below, a general trend can be identified along all the six questions: participants tended to agree that ICT has a strong potential to address the above policy issues, but at the same time stated that TEL research seems to be failing in addressing this potential to the desired extent.

Question 1: Cost reduction and effectiveness of learning¹

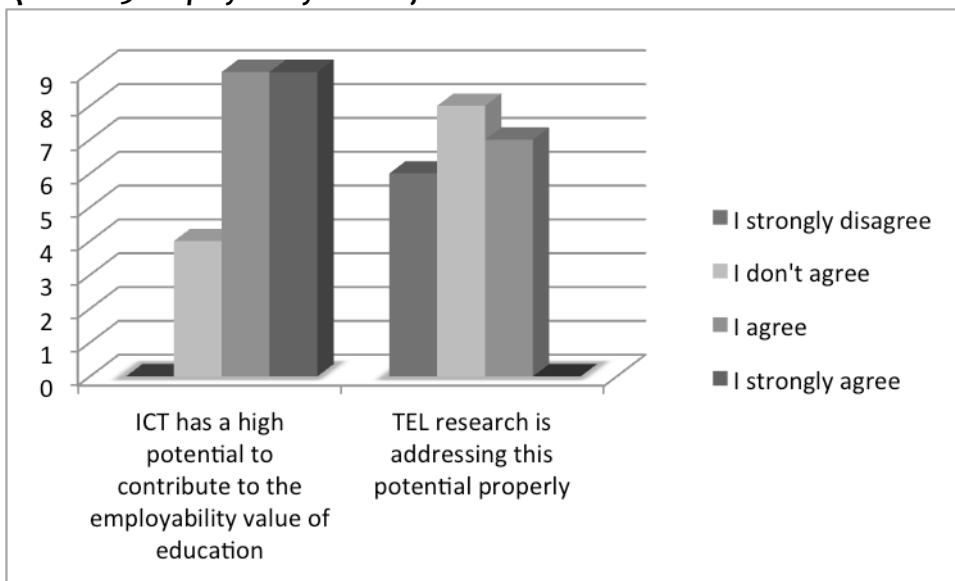


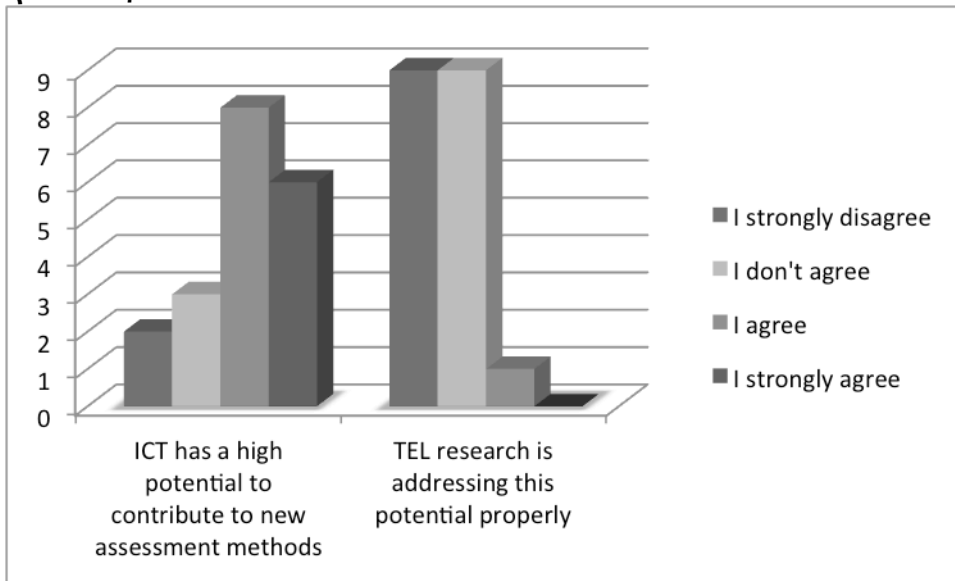
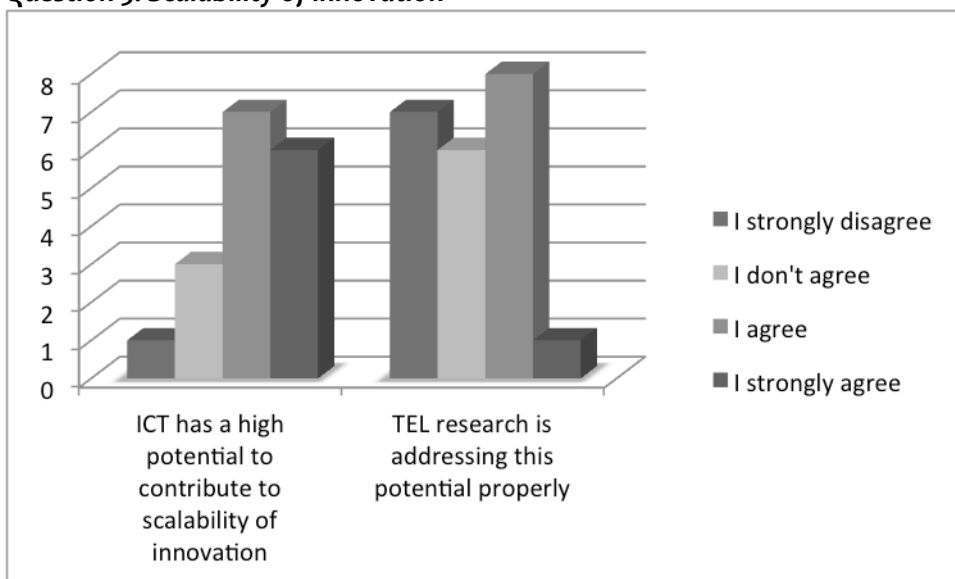
¹ The first question had only three choices. Following a comment by the audience, it was decided to add a fourth choice to the following questions, to be more statistically sound.

Question 2: Transferability of learning outcomes

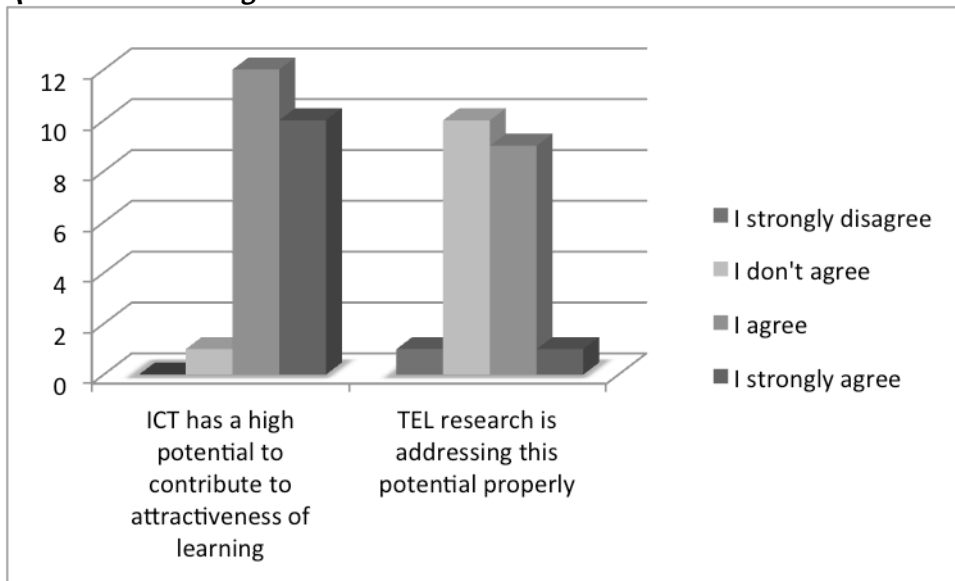


Question 3: Employability value of education



Question 4: New assessment methods

Question 5: Scalability of innovation


Question 6. Learning attractiveness



The results of the session seems to confirm that space for action exists to make TEL research more relevant with respect to the concerns expressed by policy and practice in different fields of action of European education and training. Specifically, participants agreed on the very high potential impact of ICT on the employability value of education (which is particularly important in our times of high youth unemployment) and on the attractiveness of learning (which is fundamental to fight the high rate of school and university dropouts that Europe is facing).

When it comes to the contribution of TEL research to make the potential impact of ICT for learning a reality, it was interesting to notice that almost no participant stated that this contribution is extremely high, showing a real gap between potential perceived impact and research contribution. The two areas where the contribution of TEL research resulted particularly low are transferability of learning outcomes (which is particularly worrying given the impact of this on lifelong learning dynamics and on adult earning) and new assessment methods.

In the discussion, it was mentioned that Europe is lagging behind with respect to other regions of the world such as Asia, which seems to be more advanced in terms of ICT support to education, but still Europe has a higher prestige in the pedagogical area. Further, it was commented that one of the reasons of this lack of capacity of TEL research to have an impact on societal issues is that industry is not fully involved in developing applications to support innovative education.

3. Inputs from TEL initiatives

The session was devoted to gather inputs for the HoTEL work from a number of EC projects and initiatives.

3.1 TELspain: a critical view about Spanish TEL research

Daniel Burgos (UNIR) presented TELspain, a cluster of initiatives working on TEL research in Spain that was launched five years ago and that gathers data on how Spanish institutions are involved in European TEL research. He mentioned quite number of different TEL research developments in Spain and referred to their impact both at the national and international level. **Spain is quite active in TEL, and its research groups contribute with valuable inputs** to many European R&D projects, since FP6. In addition, they collaborate worldwide with leading universities and private institutions in USA (Harvard), Australia (LAMS, Moodle), Africa (eLearning Africa), or Canada (Desire2Learn), for instance. On the other hand, Spanish researchers work on key global topics like, i.e. learning analytics, recommender systems, eLearning standards and specifications, Game-based Learning, Augmented reality, and so on. However, Spanish researchers have an issue with **mainstreaming the results of their work**. As a direct consequence, there is still little impact from the Spanish activity on the field, although they provide strong outcomes, from software development, to implemented projects and pilots, through research publications and experiments. More info at <http://www.telspain.es>.

3.2 we.learn.it: transforming the European schools through ICT

Elmar Husmann (eLIG) introduced the we.learn.it project, coordinated by the Aalto University in Finland and aiming to connect European schools for enhancing creativity, exploration and science while addressing societal changes. The project wants to support learning by doing, exploring and eventually fostering the creativity by means of “learning expeditions”, supported by the project from their initial ideas to the implementation considering the best available ICT technologies to support the creativity process. The project will develop a European network of schools from different countries and cultural backgrounds, a network of facilitators from different science and art areas which will act as advisors in the design and implementation of expeditions, a pool of public and private funding sources for school projects addressing societal changes, a collection of experiences, models, good practices and organizational advices to support schools, and a technology pool related to areas as augmented reality & mobile learning, collaborative production, game creation. The project started in November 2012 and intends to run pilots in schools in eight countries, with the target of reaching between 50 and 100 registered schools by 2014. **The issue of scalability is at the core of the project:** the design process will be paying attention to how the results of the pilots can be escalated. More info at <http://www.we.learn.it>.

3.3 The relevance of the TELMAP Roadmapping results

Vana Kamtsiou (Brunel University) presented the TELMAP roadmap approach: the project is engaging stakeholders to build sector-based innovation roadmaps focusing on operational area, and dealing with short-term and midterm priorities in different educational sectors in Europe. TELMAP believes that **what is really needed is a shift from stand-alone policy documents to implementation:** actions from expert based conceptual roadmaps to co-innovation stakeholders' oriented strategic plans should be envisaged, as well as a movement from static to dynamic roadmapping. From Static to Dynamic Roadmaps: Even when the desired shared understanding is achieved in the process of developing the roadmaps, such understanding must be continually renewed to maintain the proper foundation for decisions. This is particularly true under the dynamic and volatile conditions of today, there is a need to stress-test the roadmap outputs against the emerging realities. TEL-Map has built an observatory as an insights tapping system for changes that could impact TEL. In addition, TEL-Map Roadmapping approach uses both bottom-up (cartography type disagreement management approaches) and top-down (stakeholders sector specific) Roadmapping methods. Co-innovation stakeholders' roadmaps methodologies use Roadmapping as means to integrate policy and research planning in the strategic plans for innovation management of stakeholders' in each sector (research: assess market relevance, policy: removing obstacles). Bottom-up Roadmapping methodologies based on dynamic modelling and discourse management approaches will map, capture, externalize, aggregate and contrast the views of TEL communities, and provide a landscape for TEL in terms of where capacity is building, what are the dominant beliefs and assumptions, who is doing what, using what technologies, approaches, projects, what is perceived as threats and opportunities, what are the main visions and roadmaps of TEL stakeholders. More about TEL-Map Roadmapping in www.learningfrontiers.eu

3.4 VISIR: from micro innovation to large scale implementation

Fabio Nascimbeni (MENON) explained that **relevance is at the core of the VISIR project**, which focuses on addressing three gaps of ICT for learning in Europe: the understanding gap (use of common language), the networking gap (existence of many networks but still problems on interaction), and the mainstreaming gap (many pilots working but low mainstreaming). He further described the activities through which VISIR addresses these gaps: research and experts validations (4 stakeholders consultations for new visions on ICT in education), collection and analysis of 100 micro-innovation practices (available through an open web showcase), 7 workshops to foster networking on meaningful ideas, and last but not least the establishment of a network of grassroots innovators aiming to influence policy and to foster changes at system level based on their innovative experiences. VISIR offers some contributions to the HoTEL work: a) some consolidated visions about the contribution of ICT to learning, built on previous initiatives and based on board consultations, b) a living database of micro innovation practices within a community of micro-innovators and c) two mainstreaming events related to innovation. Finally, VISIR can be a doorway to the Lifelong Learning Programme of DG Education and Culture in the areas of TEL and media literacy, and can constitute a complement to existing views (such as the TELMAP roadmap). More info at <http://www.visir-network.eu>.

3.5 GALA: Game-based Learning as a way to transform education.

Johann Riedel (University of Nottingham) presented the GALA Network of Excellence, which aims at gathering, integrating, harmonizing and coordinating research on serious games related to learning and at disseminating knowledge, best practices and tools as a reference point at an international level. He presented the main GALA instruments. The **Technical committees**, in charge of systemizing and synthesizing the research activities, pinpointing solutions, highlighting hot-themes, best practices, critical situations from important research areas. The **Special Interest Groups**, responsible for providing a comprehensive overview of how each application field develops over time, the key stakeholders and users, their experiences as well as adoption barriers and facilitators, and application-specific needs that are already addressed or are still overlooked. The **Virtual Research Centre**, a virtual environment which supports the social networking within the participants in the project by defining, selecting, developing and promoting methodologies and tools suited for multidisciplinary SG research, education, dissemination in the broader context of the EU TEL. Finally, he mentioned the **Serious Games Academy and Society**, which has been recently founded to sustain the work of GALA in the future. More info at <http://www.gala-noe.eu>.

3.6 Open Discovery Space: building a platform for science education through ICT

Christian M. Stracke (University of Duisburg-Essen) presented the Open Discovery Space project (ODS), a social-powered and multilingual open learning infrastructure to **boost the adoption of eLearning resources**, run by a consortium composed of 51 partners from 23 countries. The project goal is to foster the innovation potential in the production of novel educational and training activities by means of efficient use of ICT combined with a proper stakeholder engagement. **ODS will run pilots in 2000 schools and 10000 teachers around Europe** will be involved around the idea that “each teacher should try to help his pupils to reach higher level of learning and that needs to be done every single day”. This vision is based on three pillars: empowerment, engagement and assessment. First, it will empower the stakeholders providing integrated access to a unique set of dispersed educational repositories. Second, it will engage stakeholders to foster their innovation potential in the creation of learning activities through the use of social based and multilingual portal that offers access to learning resources as well as provides support for the creation of educational activities. And lastly, it will help in the evaluation of the generated innovation in the production of meaningful learning activities. The results of such assessment can be used as reference for future adoption. More info at <http://www.opendiscovery.space.eu>.

3.7 The STELLAR contribution for a TEL research agenda

Marie Joubert (University of Nottingham) provided a “personal perspective on STELLAR influence on stakeholders”. STELLAR was a Network of Excellence (NoE) started in 2009 and recently concluded, aimed at reducing the fragmentation of TEL research, creating a

set of instruments to increase the research capacity of European TEL at all levels as well as defining a mid-term research agenda. During the NoE timespan, a series of consultation with stakeholders and Delphi studies were carried out, based on a “grand challenges” scientific backbone. An important lesson learnt by STELLAR is that **multiple paradigms, disciplines and perspectives must be taken into account given the high level of complexity of TEL** and at the same time makes TEL research to inherit some of the unsolved issues of those disciplines. That is the case of Educational Research, one of the cornerstones of TEL. In STELLAR several mechanisms were implemented to establish fluid dialog with different stakeholders (policy makers, teachers in formal education, continuous professional development and industry representatives) about research and it was found that “stakeholders are not interested in research unless they perceive that such research solve society problems”.

4. Debate: “Towards a federation of efforts to support the relevance of TEL for a Europe of knowledge”

In order to help closing the gaps identified in the previous debate and presentations, a brainstorming session was held to identify the most crucial problems of TEL. The following issues were raised:

- TEL research would need higher rigour and stronger quality assurance process, as a complement to the existing peer review processes
- TEL research seems to be too fragmented: in many cases, the research does not reflect a continuity with previous research efforts
- Dissemination of TEL research is weak: in several occasions the TEL potential is hindered due to dissemination strategies which do not reflect teachers and practitioners language
- There seem to be very low implementation level of TEL research in European schools and other educational establishments.
- End-users, such as teachers, have established procedures and routines that would be forced to change with the introduction of TEL research results, resistance to change is an issue.

Participants agreed that in order to tackle these problems we would need to have more European and international projects but at the same time we must ensure smooth processes of knowledge transfer and exploitation of the results of these projects, contributing to international networking and clusters building. Further, it was mentioned that TEL research stands in the intersection between Educational Research and ICT research, and includes other disciplines: because of this, TEL needs to be better contextualized and put in a clearly defined framework.

In this respect, some important lessons can be learnt from the STELLAR experience:

- a) Multidisciplinary approaches need common ground to allow proper exchange of perspectives. In the case of STELLAR, the Grand Challenges were iteratively refined and ended up in a set of tangible problems that could be picked up by HoTEL.
- b) It is of a paramount importance to make TEL research values explicit to other disciplines and perspectives.
- c) To effectively reach stakeholders, we need to define which type of actors compose the target audience and we need to establish “personalized/customized” approaches to reach each different group since there is not possible a “fit all size” solution.

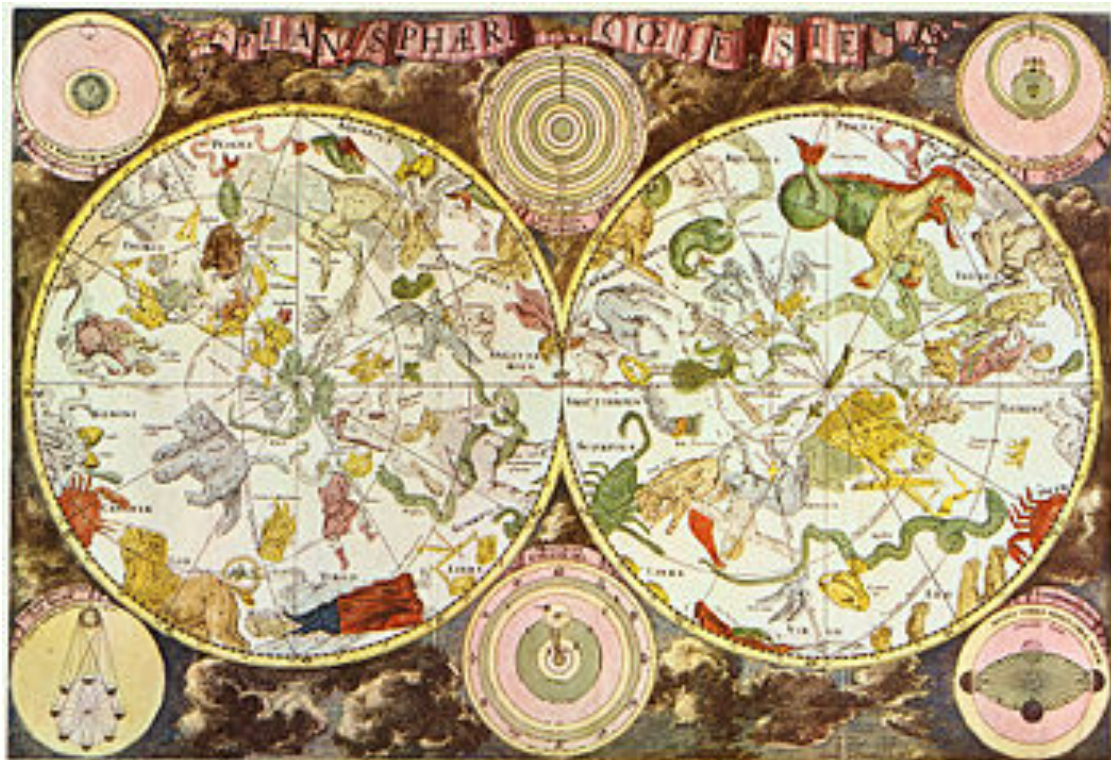
We can also find a precedent at the TEL Think Tank workshop that was organized at ECTEL 2011 (www.ec-tel.org), which was implemented to help define a shared agenda for progressing towards a mature, well-established and sustainable TEL discipline featuring improved coherence, shared bodies of knowledge, and shared methodologies and instruments, and anchoring with industry, education, business, policy makers, and other stakeholders. In addition, this workshop aims to develop understandings in the broader non-academic community of the role, purpose and progress of the field of TEL (<https://sites.google.com/site/telthinktank>).

A possible approach to move forward with respect to the present situation, where TEL research seems not to be able to reach the desired impact on society despite many successful projects and pilots, could be to **draw a TEL cartography**, which would include both the stakeholders that we want to engage and the different top-down and bottom-up perspectives that are needed and must be made visible to reach the desired impact.

Such cartography would allow to research on the role of technology as support on the educational process, broadly addressing the problems of educational research in relation to the lack of cumulativeness, presence of fragmentations, lack of dissemination, rigour and quality. Further, it would be able to represent current initiatives in the TEL field as a conceptual mapping in a dynamic way, including existing research efforts on TEL with a bottom up perspective.

This exercise would help:

1. Improving the shared knowledge of what is around in the TEL community
2. Considering challenges in different areas: research, policies and positive practices
3. Following national and EC research agenda, and possibly influence them
4. Providing support to practitioners, as eco-system that allows grass-root innovators to present themselves
5. Building a larger consensus on what needs to be done



Participants agreed to work towards a “**TEL 2020 cartography**” aiming to help “reformulating” the TEL field in support of impact, to facilitate knowledge sharing and to avoid fragmentation. The resulting map will be:

- Dynamic and “cumulative”;
- Built through a bottom-up process and open to contributions from stakeholders;
- Open to changes in practices and policy priorities.

The HoTEL project, with the support of the TELMAP consortium, volunteered to lead the exercise since this is in line with the HoTEL mission of investigating and promoting innovative TEL approaches in a “holistic” way. The next “meeting point” for the stakeholders involved in the cartography will be a Conference organised by the TELMAP and VISIR project, planned for the 18th and 19th of March 2013 in Brussels. In this occasion the idea of the cartography will be presented to and validated with a higher circle of stakeholders, and from there on the first practical steps will be taken.

Annex 1. Workshop Agenda

10:00 – 10:30: “Introduction: the HOTEL idea of a TEL relevance test”, Claudio Dondi, ScienTer

10:30 – 11:00: “The European Commission Vision”, Liina Munari, DG Connect, European Commission

11:00 – 12:00: Warming up discussion: what is needed to make TEL research more relevant?

12:00 – 13:30: Inputs from TEL initiatives (first session)

- Daniel Burgos, UNIR, TELSpain: “Integrated view about TEL through networks for learning “
- Elmar Husmann, eLIG: “The we.learn.it challenge: transforming the European schools through ICT”
- Vana Kamtsiou, Brunel University: “The relevance of TELMAP Roadmapping results to stakeholders”
- Fabio Nascimbeni, MENON: “VISIR: from micro innovation practices to large scale implementation”

13:30 – 14:30: Lunch

14:30 – 15:45: Inputs from TEL initiatives (second session)

- Johann Riedel, University of Nottingham: “Game-based Learning as a way to transform European education. Vision and sketches from GALA”
- Christian M. Stracke, University of Duisburg-Essen: “ODS: building a platform for science education through ICT”
- Marie Joubert, University of Nottingham: “The STELLAR contribution for a TEL research agenda”

15:45 – 16:15: Coffee break

16:15 – 17:30: Debate: “Towards a federation of efforts to support the relevance of TEL for a Europe of knowledge” (moderated by Claudio Dondi)

17:30 – 18.00: Carin Martell, eXact Learning Solutions: “Lunch of the eTernity initiative from CEN. Towards European standards for Textbooks Reusability, Networking and Interoperability”

Annex 2. The eTernity initiative.

Carin Martell, eXact Learning Solutions, and Jan Pawloski, University of Jyväskylä, CEN Learning Technologies Work Group presented the eTernity initiative, coordinated by the pre-standardisation group CEN Workshop on Learning Technologies (CEN WS-LT), and involving actors in the textbook market and other stakeholders from education.

eTernity aims at contributing to a common reference framework to support public policy makers, private stakeholders and academic bodies that want to work together to reshape the digital marketplace for educational resources. The goal of the eTernity initiative is to provide neutral guidance based on an agreed framework allowing us to move away from the many closed and vertical solutions flourishing in today's digital content markets. Creation, inter-mediation (also called "curation"), distribution and use of textbooks need to be based on open architectural and technical standards which will make the marketplace more interoperable and scalable, in an ecosystem of multiple players and actors.



European Textbooks Reusability Networking & Interoperability

In a nutshell, this initiative wants to move the European textbook market from a world based on siloed and closed proprietary marketplaces to a future ecosystem where smart, responsive and adaptable textbooks can interoperate across different distribution channels and devices, adapting to the learner's skills and competencies, delivering the right learning experience where and when the learner needs it. This will affect many providers, producers, consumers and curators of learning textbooks.

All eTernity activities will be coordinated by the CEN WS-LT, which includes leading academic institutions, industry players and technology providers. Participation is welcomed and free for key stakeholders such as Publishers & OER contributors, educational Institutions, students' associations, public policy makers, CLOs, CIOs and CTOs working within educational technology providers, and anyone interested in shaping a better future for Europe's educational landscape.

For more information, visit the website www.etextbookseurope.eu.

Annex 3. List of participants

Participant	Institute	Country
Dr Herwig Rehatschek	Medical University of Graz	Austria
Marie Bijmens	EFQUEL	Belgium
Fabio Nascimbeni	MENON Network	Belgium
Claudio Dondi	MENON Network	Belgium
Chantal C. Beaulieu	Eastern Townships School Board	Canada
Dr Libor Stepanek	Masaryk University	Czech Republic
Anita Lyngsø	VIA University College	Denmark
Jan Pawlowski	University of Jyväskylä	Finland
Mirja Pulkkinen	University of Jyväskylä	Finland
Martti Raevaara	Aalto University	Finland
Pierre Duverneix	Assodit	France
Prof Katherine Maillet	Institut National des Telecommunications	France
Simon Heid	NTL Europe	Germany
Ms Susanne Bärsch	Albrecht-Dürer-Gymnasium	Germany
Petra Horstmann	Fernuni Hagen	Germany
Elmar Husmann	ELIG	Germany
Olaf Dierker	TLA TeleLearn-Akademie gGmbH	Germany
Petra Newrly	MFG Baden-Württemberg mbH	Germany
Markus Fischer	Fernuni Hagen	Germany
Christoph Abels	Fernuni Hagen	Germany
Christian M. Stracke	eLC / University of Duisburg-Essen	Germany
Frederick Adu K. Bofo	Volta River Authority	Ghana
Katerina Riviou	EA	Greece
Carin Martell	eXact learning solutions S.p.A.	Italy
John Kimotho Gitabi	Kenya Institute of Education	Kenya
Liina-Maria Munari	European Commission	Luxembourg
Giovanni Schettini	European Commission	Luxembourg
Ebele Leticia Anene	Imo State University, Owerri	Nigeria
Oystein Johannessen	Qin AS	Norway
Prof Dr Nelida Nedelcut	The 'Gheorghe Dima' Music Academy	Romania
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