

Vision for Learning in Europe in 2025

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Summary

The EU-funded Learnovation project worked between 2008-2009 to stimulate a consultation process aimed to lead to a collective and consensus-based new vision of eLearning in Europe. The rationale of the exercise was to assess how and whether learning is supporting innovation among the European society, and how learning is changing thanks to the exploitation of ICT.

This article presents the results of the analysis of innovation in the context of the lifelong learning supported by the use of ICT, as well as a number of learning-related areas that need specific attention in terms of innovation and creativity. The result of this work has been condensed in “imperatives for change”, a list of actions that should be taken in all the four areas tackled by the project plus some general transversal imperatives. These imperatives can be summarised in the following *Learnovation Vision for European learning in 2025*: “Being a lifelong learner becomes a condition of life. Thanks to their massive and natural use in everyday life, technologies acquire an emancipating power on people opportunity and ability to learn, favouring a spontaneous tendency towards meta-cognition and ownership of their learning process”.

The article aims to envision the future of learning in an innovation-oriented perspective and provide a set of recommendations for policy and decision-makers on urgent actions to be launched for a positive change to happen. The consultation process launched by the Learnovation project proved to be successful in mobilising stakeholders and getting their input to elaborate future desired scenarios of evolution of learning and in defining recommendations to let such scenarios come true.

Keywords: Innovation, eLearning, change, future, Lifelong Learning, Learnovation, imperatives for change

1 Introduction and approach

Between 2008-2009 the Learnovation project, supported by the European Commission's Lifelong Learning Programme, worked to stimulate a consultation process aimed to lead to a collective and consensus-based new vision of eLearning (or technology-enhanced learning) in Europe. The rationale of the exercise was to assess *how* and *whether* learning is supporting innovation among the European society, and how learning is innovating thanks to the exploitation of technologies.

The article presents the results of the analysis of innovation in the context of the lifelong learning supported by the use of ICT, and the results of the foresight activities of the project. The article aims to envision the future of learning in an innovation-oriented perspective and provide a set of recommendations for policy and decision-makers on urgent actions to be launched for a positive change to happen.

The Learnovation project¹ was structured around 3 main building blocks:

¹ www.elearningeuropa.info/learnovation

- **Research** implying desk and field research to analyse the current and future trends of innovation in lifelong learning, as well as whether how and to which extent learning can support innovation and growth of Europe.
- **Consensus building and dissemination** aimed at mainstreaming the outputs of the project by enhancing debates on top issues emerged from research involving policy and decision makers, stakeholders (including the Learnovation Stakeholders' roundtable²) and media representatives.
- **Multiplication and exploitation** aimed at enlarging the target groups of Learnovation, addressing communities outside education and training, where ICT for learning might have interesting side-effects but is not normally taken into account. Ad hoc seminars presented Learnovation results particularly relevant to the specific context addressed.

Learnovation has focused on lifelong learning building on the concept of “eLearning territories”, developed within the HELIOS project³ and implying a focus on the learning context of use rather than the traditional sector-based analysis approach. The HELIOS eLearning territories were revised and integrated with particular focus on the innovation paradigms featuring each territory⁴.

2 Trends and challenges linked to ongoing innovation in learning

The term innovation has been used in a variety of contexts and has featured a rich debate both in the policy, research and practice⁵. One of the most well known innovation paradigm refers to the so-called “diffusion of innovation” theory⁶. According to this paradigm, whatever innovation at its early stage of development is a disruptive rather than a consensus building factor. Therefore, it tends to create divides between “early adopters” and “laggards”, which shrink over time. However, recent research pinpoints that “the simple invention-innovation-diffusion model does not do justice to the multilevel non-linear processes that firms, entrepreneurs and users participate in to create successful and sustainable innovations.”⁷

Learnovation considers both the static and the dynamic dimension of innovation paradigms, by defining them as “interpretative models of an entire constellation or a ‘coherent set’ of trends of change, which help to understand how change happens”. Since Learnovation focuses on innovation paradigms with specific regards to the use of ICT for lifelong learning, this definition could be complemented as follows: “innovation paradigms are interpretative models of an entire constellation, or a ‘coherent set’ of trends of change which help to understand how change happens in a specific eLearning territory, how this change foster lifelong learning and how it is (or it is not) enabled by ICT.”

Formal education

A strive towards innovation is the permanent status of education systems since decades, and the introduction of new technologies for learning has implied an increasingly higher pressure on education systems to innovate. The implicit and utopian belief that innovation in education could happen as fast as technological innovation has pervaded our mindsets, but we still have

² www.learnovation.eu

³ Delrio, Claudio and Fischer, Thomas (2007). HELIOS: Redefining eLearning Territories. eLearning Papers, <http://www.elearningeuropa.info/files/media/media12725.pdf>

⁴ At the Learnovation website (www.elearningeuropa.info/learnovation) it is possible to download 12 detailed reports on the state of innovation in each of the analysed eLearning territories, as well as four integrated Cluster Reports that gather the results along the four main sectors of European Lifelong Learning (formal education and training, higher education, learning at work, informal learning).

⁵ Fagerberg, Jan (2004). *Innovation: A Guide to the Literature*, in Fagerberg, Jan, David C. Mowery and Richard R. Nelson: *The Oxford Handbook of Innovations*. Oxford University Press, 1-26. ISBN 0-19-926455-4.

⁶ Everett Rogers (1962) *Diffusion of Innovations*

⁷ Innovation article in <http://en.wikipedia.org/wiki/Innovation>

to confront with scattered innovation in this area. The good side of the coin is that innovation is shifting from pilot successful cases within EU countries to systemic innovation in (some) EU countries, but the phenomenon cannot cover the European dimension yet. Learnovation identified a number of these 'wrong beliefs' that have had, in the last decade, a strong influence on innovation in the area of formal education, linked both to the issue of technology for learning and to the broader policy issue.

- **Beliefs in a shortcut from consensus to success** - At the beginning of the so called eLearning action plan there was a strong, implicit belief that synchronising the aims and goals of all actors would automatically lead to the launch of actions suitable to achieve these goals. This assumption failed, as it underestimated the amount of rhetoric within these promises as well as their potential to activate all types of resistances.
- **Beliefs in indicator-led consensus and policy definition** - This is typical for the way the Lisbon goals were originally defined, with a rather syllogistic model of interdependencies, e.g. if all citizens engage in lifelong learning, then the Union will become (almost automatically) the most competitive and most inclusive society worldwide. These approaches, based on a certain historic amount of shared enthusiasm, turned out to be too simplistic to be workable, and in particular mixed up possible mainstream solutions with procedures, which had proven their functioning only on a piloting level.
- **Beliefs in global benchmarks** - The period was characterised by serious attempts to introduce instruments of benchmarking to the field of educational institutions. These comparative global benchmarks (such as PISA, for instance) offered a high potential for alerting the public by triggering intensive discussions on education and its role in society, and on the national position within the international framework. But in many ways they failed to offer guidance in a systematic, comparative way and using effective processes, so that innovation in education could be based on a proper, professionally analytical use of benchmarking results.
- **Beliefs about “buyable” policy aims and policy success** - Over the last decade, some strategies originating from the economic sector have been directly transferred into the educational field, including the assumptions that money and the allocation of funds are the most successful and suitable policy tools to achieve goals. This type of process has ended up limiting success, because it has led to the conclusion that the non-monetary policy measures necessary or suitable for successful innovation (such as non monetary incentives and rewards, awareness raising, attitude change within society, different levels and considerations on life priorities etc.) are no longer necessary for effective educational policies.
- **Underestimation of institutional and structural inertia and its self-organisation and stabilisation potential** - Given the prevailing beliefs regarding consensus building, the contrasting processes of institutional inertia were not fully understood and their impact was therefore broadly underestimated. Initial methodologically consistent approaches to address the dynamics of inertia and to manage its change in parallel to the support of innovation have been appearing in the educational field only in the past few years.
- **Too short-term expectations for success** - Linking the perspective for successful change in educational policy to the periodicity of elections led policy makers at regional, national and European level to offer short-term perspectives (over three, four, or five years) for the achievement of substantial changes in educational institutions. This perspective completely underestimated the strong interdependencies between education and other subsystems of society, where a certain rigidity has a stabilising function in the processes of societal change.

- **Underestimation of resources necessary for sustainable systemic change in educational institutions** - Almost all resources (not only money but also time, prerequisites in changing functional processes in education, patience with the slow processes of attitude change, adjustment, etc.) were underestimated in terms of the amount required to achieve sustainable change.

Working world

Companies associate innovation with products, services and processes, but not often with learning: eLearning is not used to shape innovation, but to accompany it, and more frequently follow it. Despite the fact that this area represents by far the most innovative and active field for applied learning innovation, the following challenges have to be faced urgently:

- **Large companies' frustration:** Convergence between eLearning and Knowledge Management did not happen: eLearning has become a common practice in large organisations, but has not matched the Knowledge Management challenge. It has not gone into the area of tacit knowledge; it has just been associated to explicit and "packaged" knowledge. E-learning is used to do what was done in the classroom cheaper, but it is not used for innovation or change management. The relation between learning and innovation is missing.
- **SMEs' frustration:** E-learning was regarded, especially in the early days, as the solution for all SMEs' training problems. The building up of "social capital" among SMEs and their service providers is a challenge that was frequently lost in past years: increased competition, often reduced public funding, "overmanaged and underled" public initiatives: all these factors partially explain some of the failures, but the basic cultural problem that was not properly addressed when formulating the expectations was the lack of collaborative attitudes within SMEs when an immaterial and badly managed phenomenon such as learning is concerned. Probably the sense of urgency to learn together was not there and/or was not stimulated enough by most of the initiatives. The proposed eLearning supply may have offered cost-effective solutions to "ordinary" problems but often did not match the emotional side of the motivation to invest in learning; it was probably not associated enough to what SME leaders considered really valuable for their development or critical to their survival. This area of eLearning is not well studied, so it is difficult to say if the awareness of the problems is generalised and if other diagnostic approaches and conclusions are available.
- **Professional networks frustrations:** Individuals do not always learn and share their experiences in innovative ways through eLearning. Moreover, collaborative learning is not growing as quickly as expected. Some experiences exist but are reserved to high profile professionals, whereas the dominance is of relatively flat eLearning models, distributing the knowledge of more experienced and research oriented professionals to other members of the professional community. Furthermore, there is a strong need to better develop Learning 2.0 approaches in professional environments

Higher Education

The last decade in the higher education field has been marked by initiatives of historical significance. These strategic endeavours included the Bologna process, the Lisbon strategy of the European Union and the related eEurope - eLearning - lifelong learning initiatives and programmes. The higher education world has in the meantime been the subject of intensive challenges. In the accelerated, globalised environment, the pressure to perform placed both on institutions and their graduates from the side of the employers, the corporate sector, has increased. The impact of this pressure is partly an efficiency-raising, restructuring, innovating one, but it also contributes to the strengthening of flexibility. There is a more and more intensive competition for the professional and social space, which is now occupied by higher education, both from the corporate education and training side, and from the other educational sectors'

side. The internationalisation element has also been strengthening, reinforcing global competition among universities.

The term *evolved distance education* is increasingly being used in the sense of the traditional, professional, well-established distance education providers, like open universities, which have continuously been evolving by integrating new approaches supported by ICTs. Whilst open and distance universities put the main emphasis on the organisation of the learning process and instructional design approach, with the increasing performance, availability and affordability of ICT-based tools, their functioning has been considerably changing by integrating eLearning elements. With easier and cheaper access to higher performance ICT tools and networks, we can observe a proliferation of creative - initially experimental or pilot, but later integrated - ICT solutions. The high performance solutions on the market became more and more affordable, the technical performance of the tools dramatically improved, the spectrum of solutions widened. There has been a relatively slow but very massive penetration of different technology tools and solutions in the learning and teaching practice.

One decade ago, it was stated that it would be more accurate to regard the growth of eLearning as a process of evolution rather than as a revolution. Nowadays, it seems that the expectation about the "revolution" was a somewhat exaggerated one, linked to ambitious early eLearning visions. It was also expected that with the development of eLearning, most higher education institutions would develop and implement a strategy for its use. This expectation still sounds probably too ambitious. Recent analyses and system critics acknowledge, however, that at an undergraduate level, ICT-supported solutions are largely inspired by classroom teaching. ICT is primarily used to support existing teaching structures and traditional ways of tuition. The integration of the eLearning 2.0 approach into mainstream education did not progress as intensively as initially expected, whilst in the informal learning field the collaborative behaviour of learners and the related tools did develop. In the quality and accreditation of eLearning in higher education, positive progress could be observed, but the issue of ICT is still far from being really integrated in the current institutional approach to Quality Assurance in higher education and, more generally, in the discourse on HE modernisation and the Bologna process.

Informal learning

If a general trend can be identified in terms of (virtual) community activity in Europe and worldwide, this is a trend of participation and collective knowledge sharing and building, especially linked to the expansion of web 2.0 tools. Blogs and blogging networks, social networking software applications, eCitizen journalism, online encyclopaedias, podcast services, online networks of civil society organisations and hobby-related online discussion spaces are all community-based forms of interaction, and all of them imply some sort of learning. It can be said that this increasing participation trend is instilling a virtuous circle of collaboration. The learning implications of this trend are immense: one could say that we are slowly but steadily approaching the situation where collaborative work and learning, supported and mediated by ICT, represents the rule rather than the exception of some particular best practices.

Some innovation trends can be reported:

- First - online communities are not only experiencing an impressive increase, but they are naturally opening up to sectors such as school education and higher education, as in the case of the many university Groups in Facebook.
- Second - in terms of technology, the unexpected is starting to happen: unlike the classic computer business paradigm, the social software sector seems to have accepted the need to move towards convergence. Most of the main community-based systems are now connected and interoperable amongst themselves and the tendency is increasing.
- Third - in terms of learning dynamics, it must be noted that there has been an increase in the use of storytelling as a pedagogical technique (most of the time without it being considered in these terms), as it happens for example in many communities dealing with excluded social groups, where the learning process takes place by telling and listening to others' experiences.

These innovation trends have an impact on skills acquisition. A number of field research results (coming from studies such as “Pedagogical Innovation in new learning communities”⁸) suggest that the impact of informal learning taking place in communities is concretised through the acquisition of horizontal skills such as critical thinking, active participation, sense of initiative and socio-civic competences. ICT skills development is supported in some communities whereas the majority of them presuppose a sufficient ICT competence of members on registration.

In terms of sectors, some groups of citizens and professionals seem to be more advanced in adopting collaborative and community-based learning practices, the clearest example being the health sector, where on the one hand professionals aggregate to exchange (mostly through ICT) opinions and evidence-based cases, and on the other hand communities of patients join together for mutual support, therefore generating learning.

3 Looking ahead: expected future developments

Building on the innovation facts and trend that were found in the different sectors briefly presented above, Learnovation looked then into the future of learning (in terms of both innovation in learning and contribution of learning to innovation) and elaborated the Learnovation Scenarios. These are aimed to:

- reduce the complexity of multi-faceted evolutions while avoiding simplistic and unidirectional visions of the future
- provide a platform for debate among stakeholders which often have been characterized by conflicting interests
- encouraging individuals and organizations to position themselves with regards to core issues for the future and develop a predictive capacity and a transformative approach

Two critical uncertainties affecting future learning have been chosen, on the basis of the review of literature and internal brainstorming of the Learnovation consortium.

These are “Convergence vs. Context” and “Innovation vs. Inertia” in education and training systems.

Convergence and contextualisation are multi-dimensional phenomena⁹. One common notion has conceived convergence in terms of *internationalisation*. On these lines, 'convergence' of education designates a growth of international exchange and interdependence. It refers to a tendency to the creation of a “global education sphere” though increasing networking initiatives among learning providers worldwide and the networking power of new technologies. On the other hand, learning systems are still considerably influenced by nation states and vary considerably according to the sector considered. This variety implies the necessity to consider, respect and build on the distal and proximal forces or, in other words, learning patrimonies¹⁰, that surround learning experiences.

Inertia can be defined as “the resistance of education and training systems to change in any of the directions towards which innovation programmes and market forces would tend to push is the characterising element”¹¹. Inertia could be the result of “protectionist” public policies that prevent private and generally new actors from interfering in formal provision of education and training (closed accreditation systems, emphasis on formal titles to access public administration, etc.) or as a failure in the implementation of innovation policies, or from the internal resistance to change of E&T actors.

⁸ Study commissioned by IPTS to Sciento in 2008.

⁹ David Held and Tony McGrew (1996) *Globalization: A Critical Introduction*, Macmillan

¹⁰ For the concept of “learning patrimony” see the report “[Technologies for the Knowledge Society & Lifelong Learning - Key Findings and Suggestions for Action](http://www.education-observatories.net/pole/reports_html)” http://www.education-observatories.net/pole/reports_html

¹¹ See “L-Change-European Observatory on IST Related Change in Learning Systems IST-2000-26226” scenario and forecast report

On the opposite side there is pro-activity or innovation implying a pro-active/experimentalist attitude of organisations or learning systems operating on the basis of “Foresight Management”, i.e. anticipating rather than merely responding to change.

Once the critical uncertainties that are expected to shape future learning systems were defined, they were represented in two orthogonal axes. In this way it was possible to create a matrix (two axes crossing) that allows to define four very different, but plausible, quadrants of uncertainty. Each of these far corners is, in essence, a logical future that we can explore. The resulting scenarios are four:

1. “McLearn”
2. “Civitas”
3. “The monad”
4. “Babelogue”

Figure 1: the Learnovation scenarios

		Convergence			
Inertia	“McLearn”	Hyper competition of providers on a global scale will lead to a “strive for survival” of learning providers. Massification of learning leading to the concept of “learning fast foods”	“Babelogue”	The world becomes a global network of learning occasions/spaces available any time anywhere. Education becomes a catalyst of change and innovation	Innovation/ pro-activity
	“The monad”	Education becomes more and more insulated from the context and unable to explore emerging innovation practices into learning environments.	“Civitas”	Education improves its "profile", its "relevance" to the context, i.e. the learning patrimonies of local communities and "responsiveness" to stakeholders' needs. Education becomes a catalyst of change and innovation	
		Context			

The Scenarios were the object, together with questions related to urgent actions for change and to exogenous and endogenous factors affecting the evolution of education, of a Delphi consultation involving around 50 European experts.

The following scenarios are resulting as most expected in each territory as emerging from the Learnovation Delphi consultation:

Learning in schools: The most likely scenarios, **Civitas** and **the Monad**, fall both into the contextualisation rather than convergence trend, witnessing the still perceived need of education to be strongly related to the needs of the context and not to be too standardised at global level. The Monad is more linked to an inertia attitude (and representing therefore a more “negative” scenario) and Civitas (the more positive, or optimistic scenario) implies an increased relevance to contextual needs and to the concerns of stakeholders.

Learning in Vocational Education and Training: The need to shape tomorrow’s generation skills according to the needs of the business world is probably at the origin of the expectations on VET, which has resulted into the dominance of the **McLearn** Scenario. However, the analysis of the comments provided by respondents suggests a new interpretation of Mc Learn as a scenario where the VET systems operate more and more closely and in synergy with the

business world, with standards and customisation co-existing through smaller learning units rather than a scenario where quantity prevails over quality or where learning supply is uniform.

Training of Teachers and Trainers: the **CIVITAS** scenario is expected as the prevailing one. The following recommendations are provided to reach this scenario: educate teachers to creativity, innovation, self-management, learning facilitation; favour exchange and networking within teachers communities and between teachers and the local community; ensure differentiation of teachers' learning processes according to their specialisation and to the support function they will endorse (curriculum teacher, learning facilitator); support teachers in the use of ICT for learning "as an aware choice" rather than an imperative defined elsewhere).

Learning at and for work: **Mc Learn and Babelogue** are expected to prevail, standing within the convergence trend, implying internationalisation, universalisation and deterritorialisation of learning and of learning value and increasing networking activities as a source for learning. Recommendations of respondents related to the future evolution of this area include: increase focus on individual interests beside the company ones, increase role of ethical issues in training, favour public private partnerships aimed at increasing quality of the learning offer, increase focus on soft training, favour flexibility in access to lifelong learning for workers, foster informal learning recognition, foster non formal and informal learning through online communities but be aware of the reliability and quality issues.

Higher Education: **Civitas** was rated as the most likely scenario. It is interesting to note that the rating of the other three scenarios is quite close to the most rated one reflection both uncertainty and a pronounced differentiation of views among respondents. The Civitas scenario falls into the innovation/contextualisation quadrant, highlighting that though innovation is hoped and expected, the need to concentrate the interests and activities of Higher Education on the local context is felt as predominant.

Distance Education: **McLearn** is the prevailing scenario as far as Distance Education is concerned, followed by **Babelogue**. Not surprisingly both stand in the convergence trend, and elements of both scenarios can be found in the comments and recommendations provided by respondents: ensure access to distance education in terms of tools usability, availability and affordability; universalise distance education and digital content as a learning utility, through public commitment and public/private cooperation and quality assurance development; intend ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a tool for realizing knowledge repositories.

Individual development through eLearning: This territory presents evolutions linked to three main scenarios (**McLearn, Babelogue, Civitas**), all implying a high degree of dynamism. All the comments and recommendations provided by respondents go in the direction of supporting individual development as an integration to formal learning processes, rather than "formalising the informal". The need to develop quality assessment mechanisms is highlighted as a key challenge to be addressed (despite the risk of formalising the informal), given the increasing trend of giving more reliability to the information provided by groups of peers rather than by traditional learning providers.

Non professional learning communities and communities generating learning as a side effect. Not surprisingly, the two prevailing scenarios for these territories fall into an innovation/proactivity attitude (**Civitas and Babelogue**) and share the two sides of the coin of informal learning communities: orientation to local context on one side and internationalisation/globalisation on the other one. Recommendations by respondents are linked to supporting further the development of these communities by pushing forward the value of education and lifelong learning and by developing more and more user-friendly applications. In line with the comments related to the individual development territory, the issue of quality assurance is highlighted as a serious and urgent challenge to be faced.

4 From consultation to recommendations

In parallel with and complementing the future-oriented work above presented, Learnovation identified a number of learning-related areas that need specific attention in terms of innovation and creativity. The results of this work have then been discussed with some of the most relevant European networks in the field of ICT for learning¹² in March and in November 2008, as well as with key European and national policy makers¹³.

The result of this work has been condensed in 26 “imperatives for change” (that are available for consultation in the Learnovation web site), a list of actions that should be taken in all the four areas tackled by the project plus some general transversal imperatives. These 26 statements have been discussed and improved in small workshops and then have been voted in terms of relevance during the Learnovation Open Forum, organised in collaboration with the European Commission in Brussels on the 27th of May 2009. Following the Open Forum, with the aim to involve in the consultation all interested European stakeholders (targeting in particular E&T professionals and practitioners), the 26 statements have been at the centre of a broad online consultation. The consultation involved more than 1,100 participants and has resulted in a new list of 10 top imperatives for change, plus in a high number of bottom-up comments ideas, and concerns.

The Learnovation consultations (Delphi and consultation on the Imperatives for change) were aimed at identifying the expected and desired future scenarios of learning as well as the challenges to be addressed to innovate learning and to make learning a real contributor to innovation. The ten imperatives for change could not represent the final output of the project in terms of recommendations provision, as a short term roadmap was needed outlining actions to be taken to support change and evolution towards the best possible scenarios of future learning. The imperatives for change can be condensed into the following *Learnovation Vision for European learning in 2025*:

“Being a Lifelong learner becomes a condition of life. Thanks to their massive and natural use in everyday life, technologies acquire an emancipating power on people opportunity and ability to learn, favouring a spontaneous tendency towards meta-cognition and ownership of their learning process”.

In order to reach this vision, the following action lines are suggested, in the form of recommendations, as short-term instrumental actions to be put forward by policy and decision makers.

Formal Education (School & VET)

Policy-targeted recommendations:

- Attract younger policy makers to the field of educational policy in order to get their views included in the discussion, thereby also exploiting the potential of “digital native heterogeneity” in the process of educational policy making.
- Promote decentralisation and involvement of local stakeholders in the design, development and implementation of innovation policies
- Shift the focus of teachers’ training from ICT skills to digital skills and let teachers facilitate (not teach) ICT use for learning by guiding students on how to safely cross Internet roads, putting in place (where not existing) rewarding mechanisms for innovative teachers and trainers

¹² This has been possible thanks to the Learnovation Roundtable, an informal cooperation platform that gathers 8 key European networks in the field of ICT and innovation in learning. For more information see www.learnovation.eu.

¹³ The proceedings of these events are available at www.elearnineuropa.info/learnovation

Research-targeted recommendations:

- Monitor more systematically the contexts and processes in institutional educational innovation
- Place more emphasis on policy impact assessment, and based on that, build incremental learning policy quality loops
- Develop further studies on informal learning of digital natives so to highlight successful mechanisms to be transferred and adapted to formal education (such as peer learning as a mean to enhance empowerment and creativity of learners)

Learning at and for work**Policy-targeted recommendations:**

- Companies shall utilise ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a tool for developing and accessing knowledge repositories
- The public sector shall associate the introduction of eLearning with a rewards system for improved performance and proper leadership.
- Shift funding from general support to eLearning adoption in companies (especially SMEs) to actions focused on studying and experimenting.

Research-targeted recommendations:

- Elaboration and testing of valorisation and certification of prior learning in companies as a key lever to motivate low skilled and low end workers to undertake lifelong learning opportunities.
- Studies on quality and reliability assessment mechanisms of the information circulated through on-line communities (particularly professional networks)
- Elaboration and testing of new learning models for trainers so to support their (already happening) transition to learning facilitators, peer mentors in professional networks and catalysts of inter-organisational relations.

Higher education**Policy-targeted recommendations:**

- The strategic choices for education policy in the EU shall include a commitment to lifelong learning and the implementation of student-centred learning. ICT has much to offer to student-centred learning. Due to the specificities of the distance learning field, this has been much more present in the evolved Distance Education sector from the beginning.
- Quality assurance has much to contribute to both lifelong learning and student-centred learning. In order to be effective in this direction, however, quality assurance approaches for higher education must urgently evolve and become more open to rewarding innovation, risk-taking and stakeholders dialogue.
- Increasing attention should be paid to virtual mobility in order to build intercultural dialogue, support the internationalisation of curricula, make international study experience accessible to all students and promote cooperation with third country universities (as an alternative to “brain-draining” strategies). Within the EU, virtual mobility is starting to be perceived as a potential component of the Bologna process, bringing together joint titles in a cooperative way (rather than betting on the recognition of national degrees in different countries).

Research-targeted recommendations:

- Focus on the adoption and strategic integration of innovative learning and assessment approaches - including the use of ICT - in view of helping to implement the higher education modernisation agenda.

- Propose new indicators framework for quality assurance of higher education.

Informal learning

Policy-targeted recommendations:

- Strengthen support to the acquisition of digital skills and learning to learn competences, focussing on segments of the population at risk of exclusion to assure that nobody is left behind.
- Address the quality issues in informal learning, putting forward the concept of “learners quality literacy”, as an approach able to respect the spontaneous and differently structured learning models in place.
- Elaborate new frameworks for teachers’ competences that include training on how to recognise and assess informal learning achievements.

Research-targeted recommendations:

- Strengthen the analysis of the pedagogical and social models emerging from informal learning in online communities so to suggest new models to be adopted in formal learning.
- Investigate on how the European Qualification Framework could support recognition of informal learning achievements.

5 Conclusions

The consultation process launched by the Learnovation project proved to be successful in mobilising stakeholders and getting their input to elaborate future desired scenarios of evolution of learning and in defining recommendations to let such scenarios come true. Given the interest raised by the exercise and the relevance and potential impact of the resulting recommendations, Learnovation commits to make open consultation a permanent exercise rather than an exceptional event. To this end, the Learnovation consortium and the Learnovation Roundtable (www.learnovation.eu) will explore partnership possibilities with European and national stakeholders and networks thereof (directly and indirectly involved in learning) to make sure that open consultation becomes a mechanism for systematic bottom up policy agenda definition process involving stakeholders in the debate on the role of learning for innovation and creativity and for shaping the future of Europe.

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