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Learnovation Foresight Report

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Foresight Report



Education and Culture DG

Lifelong Learning Programme

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Education and Culture DG

Lifelong Learning Programme

The Learnovation Consortium

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TABLE OF CONTENTS

1. INTRODUCTION	2
1.1 LEARNOVATION, THE FUTURE OF LEARNING AND FORESIGHT ACTIVITY.....	2
1.2 THE LEARNOVATION DELPHI SURVEY	2
<i>1.2.1 The DELPHI methodology: a brief account</i>	<i>3</i>
<i>1.2.2 Learnovation DELPHI survey: methodology and domains of investigation.....</i>	<i>4</i>
2. DELPHI RESULTS	11
2.1 INTRODUCTION: HOW THE DELPHI RESULTS ARE PRESENTED IN THIS REPORT.....	11
2.2 EXOGENOUS FACTORS LIKELY TO PRODUCE THE MOST IMPORTANT CHANGES IN THE WAY PEOPLE LEARN	11
2.3 ELEMENTS OF THE SCENARIOS MOST LIKELY IN THE YEAR 2020	20
<i>2.3.1 New elements of future scenarios likely to appear in 2020 as suggested by DELPHI participants in the 1st round</i>	<i>29</i>
2.4 MOST LIKELY SCENARIO IN EACH LIFELONG LEARNING AREA	34
2.5 MOST URGENT ACTIONS FOR CHANGE	44
2.6 SHIFT OF BALANCE ALONG POLARITIES	73
2.7 FORESIGHTS.....	75
3. CONCLUSIONS	77
3.1 EXOGENOUS FACTORS AND ENDOGENOUS ELEMENTS: DIMENSIONS OF CHANGE IN THE LEARNING SCENARIO.....	77
<i>3.1.1 Exogenous factors.....</i>	<i>77</i>
<i>3.1.2 Endogenous elements.....</i>	<i>79</i>
3.2 MOST LIKELY SCENARIO IN EACH LIFELONG LEARNING AREA	83
3.3 KEY MESSAGES EMERGING FROM THE DELPHI SURVEY	85

1. INTRODUCTION

1.1 LEARNOVATION, THE FUTURE OF LEARNING AND FORESIGHT ACTIVITY

The foresight activity of Learnovation is framed within its goal of building a new vision of technology enhanced learning in Europe, by means of a consensus process which overcomes traditional borders of education and training and addresses learning in a much broader perspective, centred on its role in innovation and lifelong learning implementation, and in light of a policy advising perspective.

This activity has been carried out through two parallel processes, feeding one into the other and providing basis for a foresight exercise:

- ◆ Exploring emerging innovation paradigms and the actual and expected role for ICT across the lifelong learning land, mapped and investigated in its 12 eLearning territories, through a desk/field research activity also aimed at inquiring the impact of TEL on policy discourse and priorities throughout the territories, so as to build a picture of where we are and where it seems we are going.
- ◆ consensus building: organised, open and result-oriented dialogue through multistakeholders seminars, aimed at discussing and validating the work done and open up new issues feeding the Learnovation results.

Foresight activity falls within this framework, being at the same time an autonomous and complementary exercise aimed at analysing the future of ICT for Lifelong Learning in a societal change perspective. The findings of the exploration exercise, combined with the outcomes of the Learnovation Open Forum (see section 2.5 for further information) took to the identification and discussion/tuning of the so-called “Learnovation statements”, setting more urgent actions for change in each territory as well as cross cutting their borders.

Learnovation foresight activity starts from these findings as well as from an autonomous exercise of scenario planning - building on literature review, previous relevant projects and internal brainstorming within the Learnovation consortium - aimed at identifying both likely forthcoming trends and actions to shape the future, hereby defining ongoing drivers of change and domains of transformation, together with priority actions to deal with them.

1.2 THE LEARNOVATION DELPHI SURVEY

The aforementioned foresight activity, binding together ongoing results of desk/field research and consultation, finds its methodological tool in a DELPHI survey aimed at testing consensus and broadening vision on the future of learning, and framed in the Learnovation perspective, addressing its main issues.

The DELPHI methodology has been adopted to run the survey, with the aim to gather, through three consecutive rounds of questionnaires, the opinions of European experts in the field of Education and training and learning at large.

1.2.1 The DELPHI methodology: a brief account

The DELPHI methodology provides for a systematic approach to consensus building through an iterative process exploring ideas and opinions among identified experts on a specific issue.

Specifically the DELPHI process requires that experts consider issues under investigation and make predictions about future developments. Developed by the Rand Corporation for the U.S Air Force in the late 1960s, DELPHI is a method for forecasting and consensus building based on independent inputs regarding future events.

By employing a DELPHI survey it is possible to address issues which lack of a systematic shared definition, build scenarios or elaborate hypothesis to solve uncertainty, by involving experts who can elaborate “informed judgements” on the basis of their privileged knowledge of the phenomenon.

The DELPHI method is therefore dependent upon the judgment of experts. This is a particular strength because, in addition to quantitative factors, predictions connected to policy decisions are influenced by personal preferences and expectations. DELPHI forecast methods reflect these personal factors. Furthermore, the respondents are often in a position to influence events and, thus, make their forecasts come true.

At the operational level, the technique allows experts to deal systematically with a complex problem through participation in a series of qualitative questionnaires designed to elicit and develop individual responses to the problems posed and to enable the experts to refine their views as the group’s work progresses in accordance with the assigned task.

The DELPHI methodology permits a wide “expert coverage”, by involving geographically dispersed experts and it overcomes disadvantages of conventional face-to-face instantaneous focus groups, since participants have time to elaborate written answers and are not affected by the other members of the panel. In fact, panelists respond anonymously, preventing the identification of a specific opinion with any individual or organisation. This anonymity also provides the comfort of confidentiality, allowing panelists to freely express their opinions, and enabling previous responses to be revised in subsequent rounds.

The questions proposed in this survey calls for a response in the form of a rating or a text option. On the basis of the aggregate outcomes, the AVERAGE and the IQR (Inter-quartile range) per every item rated by respondents is calculated. The IQR is the range bounded at the low end by the 25th-percentile value, and at the high end by the 75th-percentile value of the aggregate answers. The minor or major extension of the inter quartile range provides an indication of the lower or higher degree of uncertainty among respondents.

The revisions take place when the answers of an expert are diverging compared to those aggregated of the other experts, i.e. they are out of the IQR: the expert is requested to review the answers provided in the former round, thus re-entering in the inter-quartile range or confirm his/her divergent answers and, in this case, explain why. The results of such a process feed the second and the third round cycles. Once a general convergence of answers is achieved (i.e.: the majority of respondents re-position themselves within the IQR) the DELPHI Survey can be concluded.

1.2.2 Learnovation DELPHI survey: methodology and domains of investigation

As illustrated above, the DELPHI survey carried out within the LEARNOVATION project was aimed at collecting experts' opinion and reach consensus on the expected future of learning, namely:

- ◆ the experts' view on the **main factors affecting change of learning systems**;
- ◆ the experts' opinion on the **future evolution of learning systems if no relevant policy is implemented**;
- ◆ the experts' suggestions for the **priority actions to be undertaken in order to reach the desired** (rather than the undesirable) **scenarios of evolution** in the future.

Therefore, the Learnovation DELPHI survey combined and runned in parallel throughout its rounds foresight exercise and questions on desirable policy: future depends – at least partially- on policy.

THE SAMPLE

200 experts have been invited to participate in the survey and, among them, 44 have participated in the first round, and a 50% of them completed the DELPHI survey.

The sample was selected to as to guarantee “expertise coverage”, both at geographic and expertise domain level, by considering learning at large, consistently with the Learnovation approach.

DELPHI ROUNDS: an overview of the process

At the operational level, the Learnovation DELPHI survey utilized three rounds of questioning - including feedback of earlier-round responses and subsequent questionnaires designed on the basis of results of the research and consultation phases of Learnovation and fed with new inputs provided by the respondents.

While the first and second rounds had a similar structure, and were aimed at reaching consensus on the three main sections mentioned above, the third questionnaire had a different cut, and addressed more cross-cutting issues (general foresights and main tensions in learning at large), able to clarify existing doubts after the first two rounds and highlight consensus on more general trends.

First and second round

The first round questionnaire was launched in June 2009. The questionnaire (presented in annex 1) was elaborated starting from the four Learnovation scenarios - illustrated below in this section - and the Learnovation statements. It was divided into three sections where respondents were asked to provide a rating from 1 to 5:

- 1 macro factors and elements of the scenarios likely to affect learning in the future. Specifically this section included: general factors likely to produce the most important changes in the way people learn in the future & elements of the scenarios most likely in the year 2020.

- 2 Most likely scenario in each lifelong learning area (the so-called “e-learning territories”), if no new policy is activated.
- 3 Most urgent actions for change.

Experts had also the option to suggest further likely elements of the future and/or actions to change/react to expected evolution in addition to those proposed in the questionnaire, thereby providing an input to the following round of consultation.

Elaboration of data: according to the DELPHI methodology, average and IQR (inter-quartile range) were the data gathered in order to analyse results and identify prevailing trends and deviating answers. All the respondents were provided then with a synthetic visualisation of these data, to which they were allowed to compare their responses, which were underlined in colour when falling out of the IQR. In this case, respondents were asked whether they wanted to reconsider their answers and align with the majority of the respondents and, if not, to state why they wanted to maintain their deviating position.

Concerning consensus on most likely future scenarios, the only average data obtained by each scenario in the diverse LLL areas has been employed to provide a synthetic representation of emerged expectations in the different areas, as come out of the consultation. In this case respondents were then asked whether they agreed with the emerged result, and if not, to explain why.

The results of such a process fed the second round cycle (launched at the end of July 2009) in which a general convergence of answers was obtained in most cases (i.e. the majority of the respondents re-positioned themselves within the IQR and reckoned the scenario emerged to be true) while a few domains still showed a certain degree of controversiality. In this second round - given their added value - further elements and inputs suggested by the respondents when submitting the first questionnaire were clustered and reformulated for rating, hence enriching the contents at stake in each area of investigation. These new data have been elaborated with the same methodology (average and IQR) and, with the same rationale, “deviating” respondents were asked to align or motivate their position in the third round.

Third round

While the first section of the third questionnaire of the DELPHI served the above-mentioned purpose, the rationale of the final round stood in investigating more general positions on major trends emerged from the survey around the future of learning as a whole.

Reading through the quantitative and qualitative results of the previous rounds, what emerged was the necessity of addressing some critical issues through a new dimension of analysis - abandoning territories and specific scenarios in favor of a much broader and “macro” perspective on general trends (access to learning, way of learning/facilitating learning, future learning spaces, etc.). Concerning these topics, respondents have been invited to react to some forecasts for 2025. Moreover, the following core tensions attached to learning of the future were proposed to respondents, with the request to provide a rating and add comments on a voluntary basis:

- ◆ Generalization VS Specialization;
- ◆ Status quo/continuity VS Experimentalism and change pushed from the bottom;

- ◆ Supply VS Demand;
- ◆ Systems adapt to individuals VS individuals adapt to systems;
- ◆ Adult learning organised around compulsiveness and urgency VS Interest and motivation as main drivers of learning in adulthood.

The elaboration of results of the third questionnaire complemented the analysis of the first two rounds, by:

- ◆ providing final results on the three core sections of the survey, including both initial inputs and those gathered thanks to the DELPHI exercise and the suggestions of participants;
- ◆ shedding light on main criticalities and opposite drivers affecting the learning domain, and liable to play an influence both on the way society evolves and policy priorities at large.

LEARNOVATION FUTURE SCENARIOS

LEARNOVATION foresight activity adopts the four future scenarios formulated within the SINCERE project¹. These were formulated focusing on two critical uncertainties affecting future learning, as emerging from literature review and brainstorming activity.. These are: “Convergence vs. Context” and “Innovation vs. Inertia” in education and training systems.

Convergence vs. Context

Convergence and contextualisation are multi-dimensional phenomena². 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 patrimonies³, that surround learning experiences.

Convergence has been also equated with *universalisation*. In this usage, 'global' means 'worldwide', and 'convergence' could be understood as the process of spreading the same values (in particular western values) worldwide. Contextualisation in this respect could correspond to the valorisation of different values into education (e.g. in view of a multiethnic society).

¹ <http://www.cfp.upv.es/webs/sincere/inicio/main.jsp>

² David Held and Tony McGrew (1996) *Globalization: A Critical Introduction*, Macmillan

³ 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

Finally, convergence is identified as *detritorialisation*. The myth of learning taking place anytime anywhere has been overshadowed over recent years by the importance of making learning happen within culturally rich social environments. In fact, there is a growing emphasis on locally determined curricula in education and training (i.e. minority languages entering into formal education).

Tensions between the local, the regional or the global will come increasingly to the fore in the coming years and it will be part of the tasks of learning systems to mitigate them. An expression of the dilemma convergence/contextualisation is, especially for large scale learning providers, the search to be bodies of global importance while also serving national or local needs.

Innovation vs. Inertia

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 them”⁴. 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 the result of a failure in the implementation of innovation policies, or the consequence of intrinsic resistance to change of E&T actors.

On the opposite side there is pro-activity or innovation.

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

Innovation can indeed be understood at several levels. The POLE consortium, with specific regard to ICT and lifelong learning, has proposed several dimensions of innovation, i.e. pedagogical, organisational, economic, technological, institutional and socio-cultural⁸.

⁴ See “L-Change-European Observatory on IST Related Change in Learning Systems IST-2000-26226” scenario and forecast report

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>

⁸ Page 7 of POLE, (2004) *Technologies for the Knowledge Society & Lifelong Learning Key Findings & Suggestions for Action* MENON Network EEIG

One could focus for instance at the macro- level (i.e. the level of learning systems, in a country or a region), at the meso-level (i.e. the level of a specific organization or group or organisations) or the micro-level of teaching/learning process in a single educational institution or individual learning.

In our context innovation could be defined as follows: 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 could be represented into two orthogonal axes. In this way it was possible to create a matrix (two axes crossing) that allowed to define four very different, but plausible, quadrants of uncertainty. Each of its far corners is, in essence, a logical future that we can explore.

The resulting scenarios were four:

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

Scenario 1: “Mc-Learn”

Mc-Donaldisation of learning is here defined as hyper competition of providers on a global scale that will lead to a “strive for survival” of learning providers, and increased pressure for cost-effectiveness. This pressure, together with the consolidation of few global learning providers (e.g. a super league of “worldwide class” universities⁹), and the increased access to education of million of people from developing countries, will produce a strong emphasis on quantity instead of quality, homogenisation and “westernisation” of educational models, curricula and visions. In this scenario, the internationalization of learning systems is based on competition more than collaboration.

The learning fast-food will be accessible everywhere in the world, perfectly standardized and transferable. (e.g. the MBA model). An expansion and generalisation of PISA-like studies will foster the uptake of a single point of view in education.

Small bite sized chunks of learning on demand, standardized, and reusable at global level will increase exponentially, but Information overload and non optimal information flows will hinder knowledge management and meta-cognitive learning.

Public investments and policies won’t be able to counterbalance these trends, since private funding of top educational institutions will increase exponentially, due to the dramatic rise of their share in the “learning market”.

Scenario 2: “Civitas”

Education improves its "profile", its "relevance" to the context, i.e. the learning patrimonies of local communities and "responsiveness" to stakeholders' needs. Education and training become more and more plural in a more and more plural society, attentive to individual and societal needs and consequently reflecting the diversification of learning and living patterns. There is a multi-directional, multi-versus integration of E&T systems (in terms of informal and formal learning, Education, training and labour market...) as education and training providers become more and more intermediaries and catalysts of regional clusters of Knowledge. They promote regional development, by investigating and addressing regional learning needs, thus becoming part of the regional innovation systems (example of Finnish polytechnics).

Albeit a small number of elite higher education institutions continue to be very internationalised, and to keep their top ranks nationally, the average education and training institution is more and more related to their immediate neighbouring cities and regions.

Lifelong learning becomes a fundamental right and duty of all members of the communities and widespread learning networks foster the enforcement of this duty. There is a significant progress in the Millennium Development Goals, also in developing countries, with regards to education and this enriches the “knowledge and action basis” for education researchers, policy makers and practitioners.

⁹ Source the Economist survey on higher education 2005 “The emerging global university is set to be one of the transformative institutions of the current era.”

Scenario 3: “The monad”

Growing fears of diversity (due to terrorism, non-acceptance of multiculturalism and the feeling that national identity was becoming threatened by globalisation ...) provoke a rejection of internationalization and innovation forces into education and training and make learning an experience more and more contained within its own local learning community or web-based community of practice. International collaborative research continues, but with a more limited number of “friendly” countries.

In this scenario the inertia of learning systems leads to an enduring high level of standardisation and low level of flexibility in education and training provision, be it publicly or privately run. The compartmentalisation of education and training does not favour the dialogue and integration between formal, non formal and informal learning. Significant disparities remain between and within the regions in terms of investment in education and research capacity.

A relatively low level of priority is attached to research and development in policy agendas, due to a shift of funding to other priorities and subsequently there is a low level of resources devoted to educational research. Moreover educational research suffers from prioritization of resources in areas like technology development and scientific research.

Scenario 4: “Babelogue”

Dialogue, mutual respect and understanding prevail over clash of civilisations, and this has significant implications for learning systems. The world becomes a global network of learning occasions/spaces available any time anywhere. Interconnected and interdisciplinary centers of Excellence worldwide become major instruments of R&D, (including educational research): they set consensus based research agendas; they act as knowledge brokers for governments, companies and individuals. Public and private funding sustains their actions and interactions. Technology driven networking induces much quicker spillover in the lower ends of education systems (and in developing countries).

The extreme reduction of space and time barriers, does not erase diversity but allows dialogue among existing models without reducing the world to a single educational model (Bruner 2000¹⁰; Castells, 1997¹¹).

Digital natives¹² play a prominent role in this scenario: their possibilities to interact with others, both virtually and physically, grow thanks to new technologies (any place any time possibilities to interact).

¹⁰ Bruner, J. (1997) *The Culture of Education*, Cambridge: Harvard University Press

¹¹ Castells, M. (1997a) *The Power of Identity. The Information Age: Economy, Society and Culture (Vol. II)*, Oxford: Blackwell

¹² OECD CERl

2. DELPHI RESULTS

2.1 INTRODUCTION: HOW THE DELPHI RESULTS ARE PRESENTED IN THIS REPORT

The objective of this report is to present the results of the three-rounds DELPHI survey, in such a way as to allow a rapid grasp of overall outcomes of the consultation.

To this aim, once the specific timing/sequences of the rounds has been provided in previous section, it was decided to follow here a logical rather than chronological approach of analysis, so as to present global findings of each main section addressed starting from the first questionnaire and as enriched throughout the survey running.

For each macro-section, distinctions will be however made explicit so as to allow readers to go back to how and when questions have been elaborated.

The next sections will indeed presents results concerning

1. **Exogenous Factors Likely To Produce The Most Important Changes In The Way People Learn**
2. **Likely Elements of Learning In 2020**
3. **Most Likely Scenarios In Each Lifelong Learning Area**
4. **More Urgent Actions For Change**
5. **Shift Of Balance Along Polarities in The Learning Scenario**
6. **Foresights For 2025**

For each section, results of each item submitted to rating will be reported, by presenting the average and the IQR emerged from the responses, together with the number of people who refused to converge on that interval, as marker of a still meaningful controversiality of the issue.

Quantitative data will be accompanied by a brief commenting paragraph discussing results by also summarizing positions of experts who refused to converge, hence highlighting criticalities.

2.2 EXOGENOUS FACTORS LIKELY TO PRODUCE THE MOST IMPORTANT CHANGES IN THE WAY PEOPLE LEARN

Exogenous factors - such as political, economic, social, cultural and technologic trends - are key elements to consider when analysing the future of learning, as of any social domain. The participants in the DELPHI survey were indeed asked to judge the impact that a series of factors will have on the way people learn, by providing a rate from 1-little impact to 5-very significant impact.

These factors included:

- ◆ globalisation
- ◆ geopolitical tension
- ◆ financial crisis

- ◆ technological progress
- ◆ multiculturalism
- ◆ increasing unemployment rate
- ◆ crisis of legitimacy of political institutions
- ◆ corporate and financial services social responsibility
- ◆ social networking on line
- ◆ decrease of public funding for education

After two rounds a certain consensus was reached on the degree of impact of these factors on the way people learn, but some grey areas remains.

While factors concerning macro-economic and political scenario, such as geopolitical tension and political institutions’ perceived legitimacy, **are reckoned to have quite a limited impact on the way people learn, those factors closer to the concrete learning activity, such as technology, appear as more relevant.**

Those **factors related to financial and economic evolutions, and strictly linked to recent financial downturn, tend to be related to expectations concerning investment in education**, both from the public and the private sector. The direction of such trend remains highly controversial. On the one hand, long term strategies for recovery and the arising of new mindsets thanks to the crisis shock are expected to produce increased investment in education (both in term of funding and strategic value paid to learning). On the other hand, resource shortage and short term interventions for overcoming the crisis, are awaited to turn into a cut-off of investment for learning purposes.

Globalisation

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
GLOBALISATION	3,7	3-4	6	5

According to the majority of respondents, **globalisation will have a significant impact on the way people learn**, though not an extreme one, as the IQR shows. During the second round, “deviating” respondents decided both to converge on this position as well as to stick to the idea that a greater role should be attributed to globalisation’s influence on learning.

Reading through the associated comments, **globalisation emerges as a multifaceted phenomenon, one which more or less directly, in different domains and by exerting different forces will affect learning.** This heterogeneity is on the other hand justified by the fact that it remains difficult at present time to unpack the big box of globalisation as social phenomenon, and make it comprehensively intelligible through a monolithic explanatory theory. The variety of foci and perspectives of analysis favoured when addressing the phenomenon – political, economic, social, cultural etc. - as well as the manifold ideological views underpinning them, turn out in the unfolding of a variety of opinions on its impact on learning, which are as many as the faces of globalisation itself.

In this framework, **some experts focus on the “global communication” side of globalisation, stating that ICT will enhance circulation and sharing of information in a global environment, favouring both formal distance education and informal learning.**

According to a more politically-oriented perspective, **an expected “failure of the globalisation project” will produce an indirect impact on the way people learn. The recent financial meltdown will turn attention from the myth of globalisation to the local layer, identified as the stronghold of identity resisting against uniformity and standardisation.**

Still from a political perspective, one of the respondent focuses on the balance of power underpinning globalisation phenomenon, for which the **soft power exerted by the most powerful countries and the influence suffered by the smallest ones are the two coins of the same political dynamics recurring in all policy fields, including education.**

Globalisation is also addressed in its cultural dimension, as a driver of behavioural models and values. According to one of the experts, **its direct influence on the individual way of learning depends on one’s own level of education and self esteem.**

Geopolitical tension

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
GEOPOLITICAL TENSION	2,7	2-3	4	3

Geopolitical tension as such is attributed a low impact on the way people learn, with an IQR which occupies the lowest side of the scale, and an average rate lower than 3.

The element is perceived as too macro and external to the individual learning dynamics and concrete learning process, hence respondents find it difficult to identify any direct effect on the way people learn.

Financial crisis

			2 round	
Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	CONV.	DIVERG.
FINANCIAL CRISIS	3	2-4	4	2

As refraining all throughout the survey, the recent economic downturn - and its echoes in the media and in policy discourse at large - apparently push people to calibrate judgements and foresights on the basis of current global economic conditions and the perception that such a shock will produce deep impacts in the years to come. However the features of this impact are more controversial and even opposite scenarios arise when looking ahead to forthcoming events.

Concerning specifically the way people learn, financial crisis results to be a very controversial factor on a double level. The wide extension of the IQR, from 2 to 4, suggests that some experts do not even consider the element as a very influential one, while for others the impact is strong.

Significantly, this **impact is primarily related to the issue of funding and investment for education, hence it addresses a policy shift rather than individual/social behaviour.** Within this framework, opposite foresights are expressed.

On the one hand financial crisis and its socio-economic consequences are expected to push forwards investment in E&T, thanks to an increased effort on the part of the state to support its citizens.

On the other hand, economic shortage could lead to cut off expenses and investment in such a long-term and immaterial goal as education, redirecting efforts in favour of more contingent recovery priorities.

Technological progress

			2 round	
Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	CONV.	DIVERG.
TECHNOLOGICAL PROGRESS	4,2	4-5	2	2

Interestingly, **technological progress is expected to have the highest impact on the way people learn in the future**, as the exogenous factor able to concretely affect the modalities (time, space, etc), means and attitudes that people adopt in their learning experience. The IQR as well as the average rate are impressively high, with a negligible number of deviating answers after two rounds.

One of the respondents laments however a lack of precise evidences supporting the idea that technologies can truly change the way people learn. **Further empirical evidence is therefore claimed to support the existence of such a direct relationship**, hereby opening up room for debate around a desirable role for research in this field.

Multiculturalism

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
MULTICULTURALISM	3,3	3-4	5	1

In a world where globalisation, communication and mobility is reality, multiculturalism is expected to have quite a significant impact on the way people learn in the view of the DELPHI respondents. The “multicultural society” is a very up-to-date label for the XXI century globalised world, which reproduces at all levels the cultural clashes triggered by the compression of distances (both physical and virtual) and new migration flows. Within this framework, the challenge of diversity management and integration, as well as perceived threats of contamination and identity loss, refrain in political agendas, showing the two coins of a steady phenomenon, supposed to affect and transform traditional societies, once opened up to diversity. Learning, as a socio-cultural and interactive phenomenon, is indeed expected to be touched by such a process, no less than other social dimensions of our lives.

However one of the respondents, disagreeing with the majority, argues that **“multiculturalism changes and had been changing what people learn, not itself changes how people learn (...) unless there were significant alternative approaches to learning in other cultures that we might expect to embrace”**.

Increasing unemployment rate

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASING UNEMPLOYMENT RATE	3,2	2-4	2	2

Looking at the average rate, increasing unemployment rate results to have a medium impact on the way people learn. However the extension of the IQR and its position right on the middle of the scale highlights a diversity of opinions which is not negligible.

As for the financial crisis - and strictly linked to its consequences - **the issue at stake is how far increasing unemployment and new skills shortage will exert pressure on policy making for lifelong learning implementation and development, especially focused on adults workers' needs for retraining and skills updating.** This enhanced attention to adulthood, in view of strengthening workers' position in the labour market, is expected to produce changes on the way people learn, since **an effort of adaptation to adult learners' specificities and exigencies will be required in learning provision.**

Crisis of legitimacy of political institutions

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
CRISIS OF LEGITIMACY OF POLITICAL INSTITUTIONS	2,3	2-3	5	3

Crisis of legitimacy of political institutions is not expected to have a significant impact on the way people learn, according to the majority of respondents. As for other exogenous factors, such as geopolitical tensions, a direct linkage between this element and the learning experience of individuals seems hard to find, and the relationship appears rather weak.

However, **a sort of cascade effect on learning could derive from the crisis of legitimacy of political institutions**, according to one of the experts. This view holds on the fact (and reminds) that education in present democratic societies and welfare arrangements is basically a public policy, hence it is fed by the social pact between the state and its citizens, the former depending upon legitimacy of institutions delivering public provision, among which education. The crisis of this legitimacy is indeed expected to affect learning, starting from a loss of trust on the part of citizens and changing attitudes and commitment of public servants.

Corporate and financial services social responsibilities

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
CORPORATE AND FINANCIAL SERVICES SOCIAL RESPONSIBILITY	2,6	2-3	4	5

According to the majority of respondents, **the role that the “social responsibility” of the private sector could play on the way people learn is limited**, even if slightly higher than that attributed to political legitimacy. The point is interesting since the two elements refers respectively to the private and public sector’s behaviour/credibility with regards to socially relevant goals such as education and training.

As far as corporate and financial services social responsibility is concerned, **any envisageable influence on learning is associated to the impact that the ongoing financial crisis is expected to have on ethical commitment of private, for-profit bodies.**

According to these opinions, two opposite scenarios are equally predictable:

- ◆ **In a positive scenario, financial crisis acts as a catalyst for raising the issue of social responsibility in private institutions**, pushed by a growing concern of the public sector around the safety of the system and its governance and widespread awareness across the segments of society. In this picture **attention and investment in training increases.**
- ◆ **In a negative scenario, the financial crisis pushes companies and private institutions to abandon “social responsibility” commitment**, and to focus on their short-term priorities, **neglecting learning and training of their employees.** The perception of an overall dismissing of ethic and of true commitment to social responsibility has a cascade effect on society, namely on the value paid to education and on strategic investment in learning as a social asset.

Social networking on line

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
SOCIAL NETWORKING ON LINE	3,8	3-5	2	3

Strictly bound to technological progress, the rise of **social networking on line is expected to have a significant impact on the way people learn, even if on average its specific impact is deemed lower that that of technological progress at large.** The IQR is in fact more extended, reflecting a more heterogeneous distribution of opinions among experts.

Decrease of public funding for education

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
DECREASE OF PUBLIC FUNDING FOR EDUCATION	3,8	3-4	4	6

Not surprisingly, as a general result, decreasing public funding for education is expected to have an impact on the way people learn. Moreover, a remarkable number of respondents refuse to underestimate the role of this factor, and stick to the maximum rate of 5.

That of public investment in education is on the other hand a very sensitive and up-to-date concern, holding on the fact that, as mentioned above, education is primarily imagined as a public policy. Furthermore, it is here fair to mention what the Learnovation desk research has put in evidence around the existence of “beliefs about buyable policy aims and policy success”¹³ in the education sector.

In the experts’ opinion, decreasing public funding is in particular expected to enhance competition among education institutions for fund raising and to push forwards public-private partnerships. In this context, market mechanisms will produce a “natural selection” of education providers, leaving room only for excellence, with small sectors striving for survival and small universities absorbed in a process of scaling.

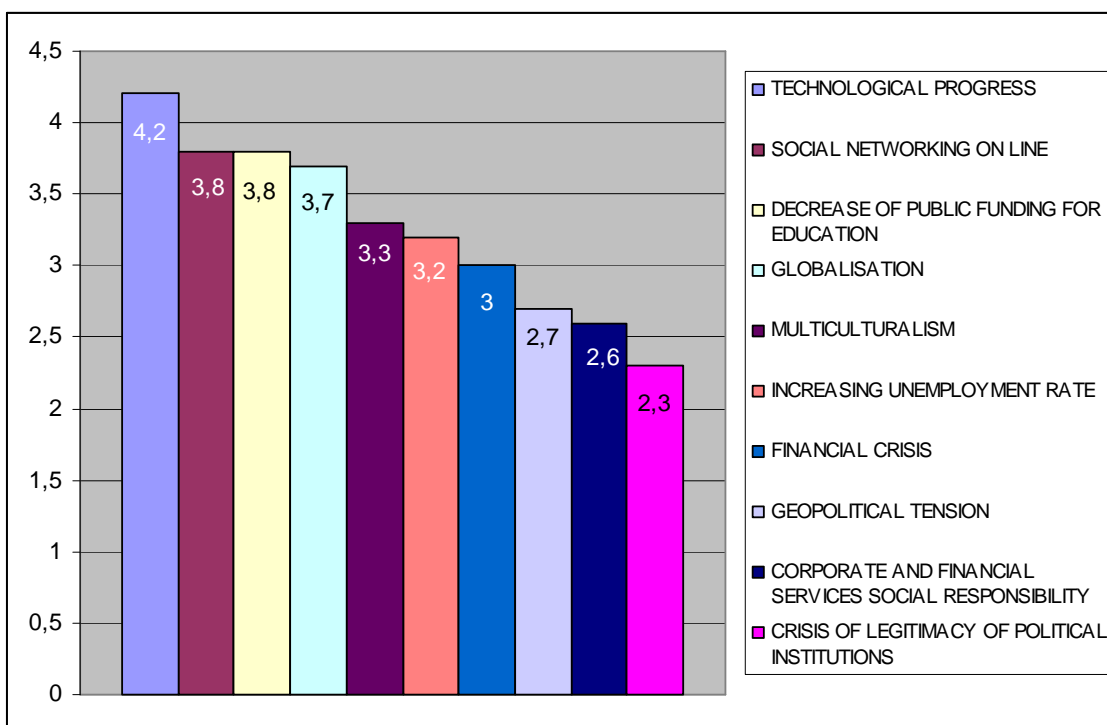
The following graph and table present the classification of the rating in decreasing order. All in all, the factors expected to influence and change most the way people learn are:

- ◆ technological progress;
- ◆ social networking online;
- ◆ decrease of public funding in education;
- ◆ globalisation.

¹³ *Learning in the Life of Digital Natives*, Cluster Report n.1: School, VET and Training of Teachers and Trainers, Learnovation project, October 2008, p 11, available at <http://www.elearningeuropa.info/files/lo/LO-Cluster1.pdf>. In the mentioned report, “Beliefs about “buyable” policy aims and policy success” refer to the fact that *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. Unfortunately, there is some evidence proving that the negative version of this assumption is true. There is evidence that when a decided budget increase for education does not take place, it is very likely that the agenda of substantial educational change will not succeed.*

This generally accurate observation has been transformed – if not in an entirely logical way – into the belief that innovation in the desired direction will happen almost automatically if sufficient budgetary resources are allocated and spent properly to achieve it. 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 awareness raising, attitude change within society, different levels and considerations on life priorities etc.) are no longer necessary for proper educational policies.

Which of the following factors will produce most important change in the way people learn? Please rate from 1- very little impact to 5- very significant impact



Which of the following factors will produce most important change in the way people learn? <i>Please rate from 1- very little impact to 6- very significant impact</i>	AVERAGE	IQR
Technological Progress	4,2	4-5
Social Networking on line	3,8	3-5
Decrease of public funding for education	3,8	3-4
Globalisation	3,7	3-4
Multiculturalism	3,3	3-4
Increasing unemployment rate	3,2	2-4
Financial crisis	3	2-4
Geopolitical tension	2,7	2-3
Corporate and financial services social responsibility	2,6	2-3
Crisis of legitimacy of political institutions	2,3	2-3

2.3 ELEMENTS OF THE SCENARIOS MOST LIKELY IN THE YEAR 2020

A series of elements drawn from the Learnovation scenarios have been proposed to DELPHI participants to be rated on the basis of their predictability for 2020.

Moreover respondents were asked to suggest further elements, which they reckoned likely but were not included in the list proposed.

Their inputs resulted to cover diverse areas, going from the more intangible dimension of values and importance attributed to learning to more concrete domains of investigation, such as future organisational shape and governance of learning systems, geometries of actors involved and expected directions of change.

All together, these suggestions have been proposed in the second round as elements likely in the year 2020 (with final results gathered through the third round), and are indeed presented at the end of this section, for they belong to the same category, but widen the perspective of the scenarios originally proposed towards further dimensions.

Consolidation of few global learning providers

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
CONSOLIDATION OF FEW GLOBAL LEARNING PROVIDERS	2,7	2-3	4	7

The majority of respondents does not consider the consolidation of few global learning providers among highly likely elements for 2020. In one of the experts' view, such a process would crash against a strong resistance on the part of public opinion, which would not allow such a monopolisation (and subsequent standardisation) of learning supply at international level.

However, the number of deviating opinions remains significantly high after two rounds, opening up room for discussion. According to those who disagree, **the combined effect of branding and scaling together with the natural selection operated by the global economic crisis are expected to favour a significant de-fragmentation of the earning supply and the rising of a few global-sized providers**, absorbing increasing pieces of demand.

Globalisation of educational models and curricula

			2 round	
Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	CONV.	DIVERG.
GLOBALISATION OF EDUCATIONAL MODELS AND CURRICULA	2,9	2-4	2	1

According to the majority of respondents, **in 2020 we should expect educational models and curricula to maintain their differences and variety and responsiveness to the local context**, rather than to become firmly organised around a few global models. The position of the IQR compels however to take into account a rather wide distribution of opinions, including both low and quite high rate.

One of the respondents raises concerns around the nature of such a globalisation. In his/her view, out of any change in the mindset of the educators first - themselves undergoing a learning process - globalisation of models and curricula turns out to be simple exportation/imposition of foreign patterns, through mechanical transfer, rather than an aware adoption of common successful provision. This risks to lower overall quality of education everywhere, rather than to enhance it.

Standardised learning solutions and accreditation models worldwide

			2 round	
Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	CONV.	DIVERG.
STANDARDISED LEARNING SOLUTIONS AND ACCREDITATION MODELS WORLDWIDE	2,8	2-4	2	6

As for globalisation of educational models and curricula, **respondents seem sceptical with regards to a sharp trend taking in 2020 to standardised learning solutions and accreditations models worldwide.**

It is not a case that among those falling out of the IQR, a net majority still stick to the opinion that this element deserves an even lower rate. Therefore, even if the IQR could allow ambiguous interpretations, the overall result seems clearly unbalanced towards the improbability of the element for 2020.

Forecasts refer rather to a move towards differentiation, both along local/context-based lines as well as personalisation and tailor-made solutions.

The former refers to increasingly localised learning solutions, designed on the features and the needs of the context, and maintained as such also thanks to a firm grasp of national/regional educational authorities on learning supply, as a political reaction to globalisation tendencies and perceived threat on traditional state-centred power on which the existence of political institutions itself stands.

The latter refers rather to a trend towards personalization of learning solutions, more and more tailored on individual needs and on their diversity, hence escaping rather than incurring from any standardization and centripetal move, and multiplying definitions and opening borders of learning solutions pushed by the aforementioned centrifugal forces.

Standardization is also expected to face a strong people and civil society resistance, in the opinion of one of the respondents. The acknowledgement of growing people awareness and understanding of the value of education and of their learning needs and rights, appears more than once throughout the DELPHI, suggesting a further area of investigation.

Access to learning for all

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ACCESS TO LEARNING FOR ALL	3	2-4	2	6

Looking at numerical results, “access to learning for all” occupies a medium position, with an IQR covering the middle of the scale and an average rate of 3. A significant number of deviating opinions in the second round tends however to shift the balance towards an even lower likelihood of the element.

Broadening social inequality across different areas of the world is in particular the most influential obstacle hindering to imagine learning accessible to ALL in 2020.

At a more political level, the perception of a tendency to align education strategies through a benchmarking exercise to a dominant model deemed successful and combining stronger responsiveness to labour markets needs and most powerful stakeholders interests, raises concerns around **loss of focus (and effort) on the priority of basic access.**

In general, the issue of access results to be highly controversial, as one can see by summing up results of the survey explicitly addressing access to education and universal implementation of LLL and TEL.

In particular, it is exactly the feasibility of such a universal coverage that results highly idealistic, against existing deep socio-economic (beyond than digital) divide among areas of the world and even within the same area. Perceived increasing inequality endangers positive forecasts.

Increased responsiveness of education to stakeholders' needs

			2 round	
Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	CONV.	DIVERG.
INCREASED RESPONSIVENESS OF EDUCATION TO STAKEHOLDERS' NEEDS	3,4	3-4	2	1

In line with the overall acknowledgement of a trend towards increased localisation of learning solutions, **an increased responsiveness to stakeholders' needs is expected as a rather likely feature of 2020.**

Using the words of one of the participants, *"Bulky education systems dominated by huge bureaucracy are a legacy of modernity. The future will be dictated more by stakeholders with consequent reduction in power of national control and bureaucratic ruling"*.

This statement pinpoints an extreme position, which is counterbalanced by more moderate numerical results combined with the expected resistance on the part of central institutions to maintain a firm grasp on education provision, which will act as counterforce.

Learning initiatives by E&T institutions more and more linked to the needs of the local context (region, cities)

			2 round	
Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	CONV.	DIVERG.
LEARNING INITIATIVES BY E&T INSTITUTIONS MORE AND MORE LINKED TO THE NEEDS OF THE LOCAL CONTEXT (region, cities)	3,6	3-4	5	4

The theme of "localisation" features prominently also in this element, focusing on the role of E&T institutions as intermediaries and catalysts of regional clusters of knowledge. Considering where the majority of opinions falls, combined with those ones sticking to the highest rate, **increased strategic localisation of learning initiatives is among expected features of the near future.**

According to the DELPHI participants, this trend will be shaped by two exogenous factors.

On the one hand **the uncertainty coin of globalisation and its rapidly changing economic conditions will foster focus on comprehensive local development strategies**, addressing the specificities of the territory through cross-sectoral approaches, namely cooperative networks involving relevant stakeholders, including E&T institutions. They will promote local development, by investigating and addressing specific learning needs, thus becoming part of regional innovation systems.

On the other hand, **E&T institutions are expected to be involved in a setting of market competition characterizing learning supply-demand dynamics**, which will compel them to be more respondent and connected to the local context, so as to remain palatable through a more appealing and relevant supply.

Lifelong Learning becomes a fundamental right and duty for all citizens of the world

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
LIFELONG LEARNING BECOMES A FUNDAMENTAL RIGHT AND DUTY FOR ALL CITIZENS OF THE WORLS	3	2-4	1	5

According to the DELPHI results, **a universal right/duty to LLL is hardly expected to be reality in 2020**. According to the rationale of the foresight exercise, the formulation of this specific element was on the other hand among most ambitious ones, and to some extent provocative, referring to an ideal-typic representation of a civitas scenario.

Rather positive opinions have been nonetheless expressed together with very sceptical ones, as the IQR and average rate show.

The latters - reinforced by the majority of deviating opinions - refer once again to **broadening social and economic divide across the world which, hampering even basic access to education, makes lifelong learning aspirations even more unlikely**.

Interestingly, a more optimistic point of view reintroduces the idea of increasing people awareness of their “learning rights”, and subsequent **consolidation of bottom-up advocacy of the right to lifelong learning**, favouring its implementation in the near future.

Rejection of internationalisation and decreased flexibility and attitude to innovate by learning systems as a consequence of geopolitical tensions

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
REJECTION OF INTERNATIONALISATION AND DECREASED FLEXIBILITY AND ATTITUDE TO INNOVATE BY LEARNING SYSTEMS AS A CONSEQUENCE OF GEOPOLITICAL TENSIONS	2,3	2-3	8	3

Looking ahead to the future, **internationalisation, flexibility and attitude to innovate of learning systems are not expected to be hindered by geopolitical tensions.**

The trend is rather considered as an autonomous one, which is already underway and expected to continue and increase, pushed forwards by new generations. **Grown up in an open communication environment, offering opportunities of both virtual and physical worldwide experience of exchange, new generations develop an intrinsic more flexible and open-minded attitude and a *natural will to internationalise.***

The geopolitical bias is however reintroduced by one of the respondents, arguing that **attitude towards internationalisation and innovation embeds international power relationship dynamics, hence reflecting power differential between small and large countries.** This turns out into a different attitude, the one committed to maintain the status quo shaped on the hegemony features, the other more ready to adopt changes, since less is at risk to be lost.

Access to technology enhanced learning for all

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ACCESS TO TEL FOR ALL	3,4	3-4	8	7

In 2020, access to technology enhanced learning is interestingly expected as more likely than access to learning for all and individual right to LLL. Despite a quite concentrated IQR, a significant number of respondents in the second round decided to stick to diverse deviating positions, highlighting a wide distribution of opinions around the element.

According to the “pessimists”, the main factor hindering universal access to TEL is the existing digital gap directly coupled with worldwide social inequality, highly expected to increase in the years to come. Moreover, an insightful analysis pinpoints that filling the infrastructural divide would not guarantee for a fruitful exploitation of technologies in learning everywhere, since both specific political commitment and specialized know-how are also required to achieve the goal.

The “optimists” share the opposite belief that TEL will spread within the framework of lifelong/lifewide learning discourse and its ongoing implementation, encompassing and combined with a growing attention to the specific needs of the weakest groups (i.e. disable people and elder people), and also pushed from bottom-up, thanks to people growing interest in learning out of formal contexts and through innovative means.

Using the words of one of the respondents, a “learning utility” will emerge (in the framework of LLL paradigm) and make access to technology enhanced learning a reality for all.

Informal learning through networking emerging as the XXI century learning model, allowing for diversity and dialogue in education

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INFORMAL LEARNING THROUGH NETWORKING EMERGING AS THE XXI CENTURY LEARNING MODEL, ALLOWING FOR DIVERSITY AND DIALOGUE IN EDUCATION	3,5	3-4	8	7

According to the majority of comments, while informal learning through networking is expected to be an acknowledged and outstanding reality in 2020, it will be hardly “THE XXI Century Learning Model”, rather one of the models complementing formal education. Only a minority among deviating opinions supports instead the idea that web 2.0 and learning 2.0 within the frame of specialised learning community will act as catalyst taking informal learning to be the XXI century’s model.

A significant number of respondents in the second round stick to very low rates, although nobody denies the impact of the informal dimension on future representation of learning.

One of the experts stresses in particular on the impracticability of informal learning as “the” learning model in our society, due to a perceived irriducible contrast between informal learning features and the needs of a learning society - capitalizing on knowledge accumulation, reproduction and trasmission throughout the centuries and the segments of society, hence requiring a certain degree of formalisation.

According to this opinion, *since informal learning means no formal curricula, no formal assessment, no formal accreditation. (...) it cannot be the model if we want to be a “learning society” building on knowledge and capability already developed by the society.*

According to the respondents, **a resistance on the part of E&T institutions to the prevailing of informal learning** on the other educational models, namely over formal education, is also expected.

Emergence of worldwide and regional interdisciplinary centres of excellence

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
EMERGENCE OF WORLDWIDE AND REGIONAL INTERDISCIPLINARY CENTRES OF EXCELLENCE	3,7	3-4	6	3

The element is rated as rather likely in 2020 by the majority of respondents, with a **strong focus on the “interdisciplinary” dimension, expected to be a prominent feature of future approaches to knowledge, as well as a desirable step towards innovation** of learning systems.

Interestingly, perplexity and caution have been expressed in a few comments around the **understanding of the concept of excellence**, which features on top of policy discourse but is perceived as defective of an insightful reflection. This is in turn highly required considering the inner power of the brand of excellence of shaping the market of learning providers and celebrating centres of knowledge production. In such a sensitive domain, who is entitled to define criteria of excellence? Is there one only definition of excellence, or as many as the diverse learning contexts?

Increased investment in E&T by public funding

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASED INVESTMENT IN E&T BY PUBLIC FUNDING	3	2-4	3	4

Not surprisingly, and consistently with overall DELPHI results on expected public commitment for education in the future, **experts' foresights on public funding show opposite signs.**

Envisaged scenarios fall within the shared perception that present challenging socio-economic conditions will sharply affect future public policy and, notably, the education domain. However, **within ongoing design exercise of strategies to cope with the crisis, education is expected both to become a cornerstone of recovery, hence a major voice of state budget, as well as to suffer critical cut off of expenses,** redirected towards more contingent priorities set out by the state of emergency. The former possibility is usually associated with optimistic expectations of a path-breaking effect of the crisis, changing mindsets and political priorities in a long term strategy for sustainable development and new worldwide order. The latter refers to concerns about short-term recovery recipes taking money away from education and downplaying the importance of learning within society.

Increased investment in E&T by private sponsors funding

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASED INVESTMENT IN E&T BY PRIVATE SPONSORS	3,2	3-4	4	2

While the direction of public investment is a controversial element, results are more consensual when private sponsor funding is at stake. An **increased investment in education and training on the part of the private sector is in fact reckoned as a rather likely feature of the near future.** This results is consistent with a quite predictable diversification of learning providers in the knowledge economy shifting from material to immaterial production, hence fostering the demand for education and knowledge from all segments of society, making the market more attractive.

Increased role of public-private partnership in E&T

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASED ROLE OF PUBLIC-PRIVATE PARTNERSHIP IN E&T	3,5	3-4	8	4

Not surprisingly, **public-private partnerships are expected to increase in E&T in the years to come**, following a trend which is already in place, and is deemed able to combine the best features of each partner, producing a virtuous model of innovation and efficiency.

According to one of the respondents the element deserves the highest rate, since *“public-private partnership will be a favourable choice on both side: they will cut down cost for the private for hiring experts and lecturer, thanks to social taxes, while they will fill the technological gap for the public”*.

2.3.1 New elements of future scenarios likely to appear in 2020 as suggested by DELPHI participants in the 1st round

With the same methodology employed so far, in this sub-section we present the results obtained by the items suggested by the respondents in the first round as further elements likely to characterize 2020 and not included among those proposed by the questionnaire.

A certain convergence has been reached around these elements through two rounds questionnaires (namely the second and the third round of the survey), showing that the respondents consider most of the elements proposed by the other participants as rather likely. The IQRs concentrate on the highest part of the scale (3-4) and average rates are higher than 3, while none of the element has reached the very top of the scale.

Increased value attributed to learning and education and penetration and mainstreaming of Lifelong Learning as a fully interiorised perspective on life and society

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASED VALUE ATTRIBUTED TO LEARNING AND EDUCATION AND PENETRATION AND MAINSTREAMING OF LLL AS A FULLY INTERIORISED PERSPECTIVE ON LIFE AND SOCIETY	3,5	3-4	3	1

Several suggestions of the respondents in the first round addressed the broader dimension of values, attitudes and cultural models concerning learning as well as society at large. Interestingly, they all shared optimistic foresights towards **the future role of education in the knowledge society, highly expected to increase its importance thanks to the mainstreaming of lifelong learning in the engineering of the social body, moving towards an age of “invisible learning”**.

Positive feedbacks have been collected on this element through the second round, though experts seem more willing to intend it as a **gradual process in place in 2020**, rather than an already fully-fledged scenario.

Specialisation/diversification of education and training providers

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
SPECIALISATION/DIVERSIFICATION OF EDUCATION AND TRAINING PROVIDERS	3,8	3-4	5	2

Specialisation/diversification of E&T providers is expected to feature prominently in the 2020 education scenario. That of specialisation/diversification is one of the core dimension emerging from the DELPHI foresight exercise, as a process affecting learning at large, and responding to increased differentiation of needs and requests on the demand side (both related to the individual and the diversity of contexts and territories) and subsequent response on the supply one, as well as the natural effect of market mechanisms, pushing towards specialisation and diversification.

Trends towards increased privatization of knowledge

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
TRENDS TOWARDS INCREASED PRIVATIZATION OF KNOWLEDGE	3,1	2-4	2	2

The wide range and central position covered by the IQR confirm that the issue of **knowledge privatization raises controversial opinions**. In fact the element can be evaluated against opposite ongoing trends and subsequent future scenarios associated with the two coins of the knowledge society.

Its economic side holds strongly on the upsurging of a market of ideas, where competitiveness builds on the production and marketization of innovative knowledge and its applications. Current attention on intellectual property rights, in the frame of increasing tertiarisation of the economy, could be interpreted as marker of the strategic advantage of owning pieces of knowledge, by means of its privatization.

The **knowledge society** is however expected to reverse such a trend, envisaging a **scenario of full and free circulation of information**, thanks to ICT, open resources and the diffusion of innovative and cooperative approaches to knowledge creation and sharing. According to this picture, knowledge is a worldwide public utility available to everybody and escaping from any privatization.

Emergence of innovative institutions as grass-root leaders of change

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1=least likely to 5=most likely)	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
EMERGENCE OF INNOVATIVE INSTITUTIONS AS GRASSROOT LEADERS OF CHANGE	3,6	3-4	2	4

Inputs provided in the first DELPHI round suggested the emergence of innovative leading forces, fully convinced of the potentialities of technology enhanced learning and pushing for change, though struggling in the short-term with the resistance of traditional educational authorities.

These positions have been reformulated as “Emergence of innovative institutions as grass-root leaders of change”, and the element has been rated as rather likely by the majority of the respondents, with a few deviating opinions highly supporting the prominence of this element.

In these views, **innovation’s breeding ground is that of small organisations**, rather than traditional large bureaucratic institutions, and **its only viable direction is from bottom-up** (even if, at a later stage, mainstreaming innovation requires for cooperation between grassroot initiative and top level institutions). Moreover, **traditional organisation of learning systems around the concept of national community is deemed unable to satisfy new individual demands and new way of organising individual interests along non traditional lines**, following cross- borders identities defined on the basis of cultural affiliation and shared interests, rather than nationality.

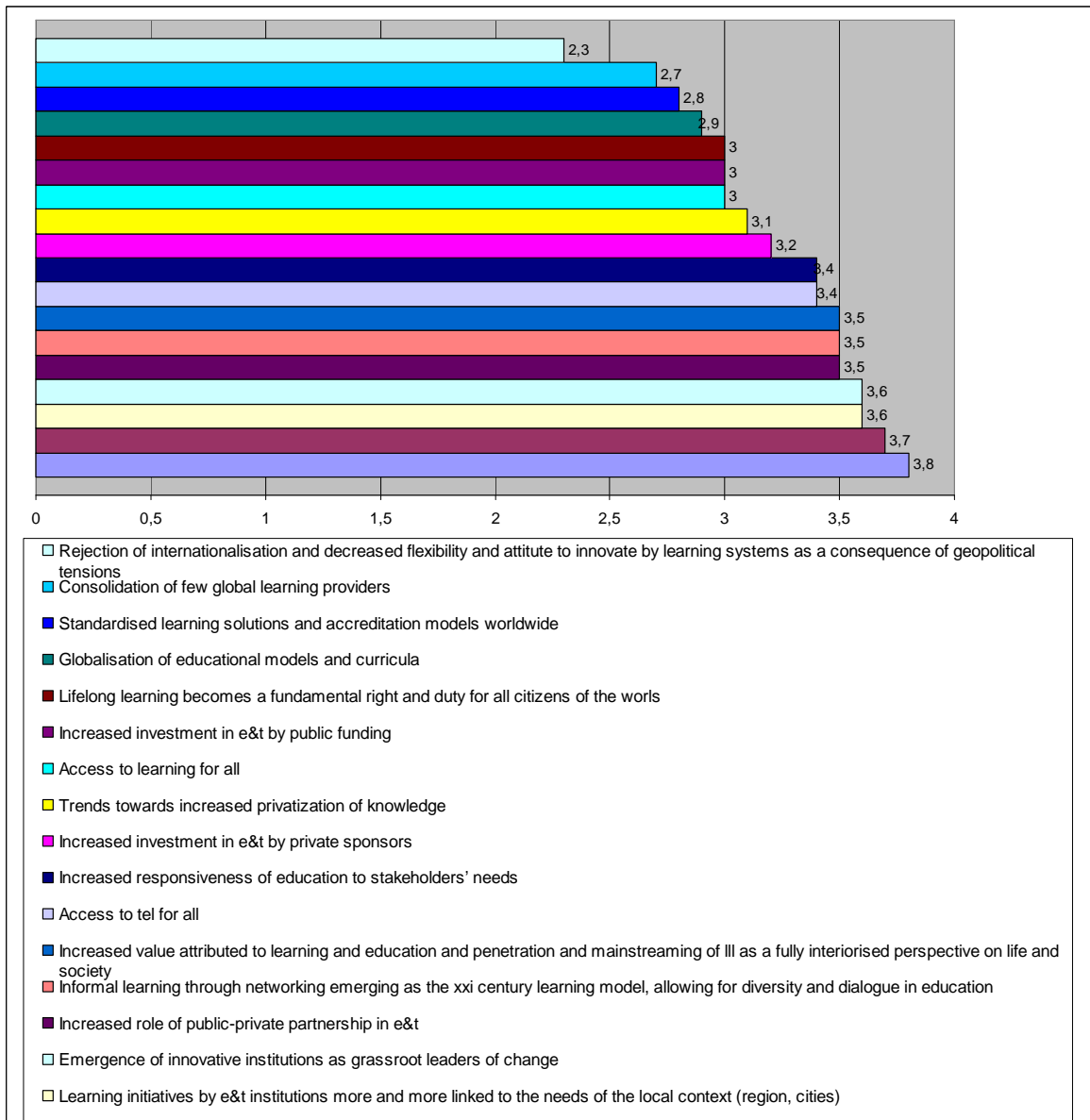
According to one of the experts, **evidence does not support however such optimist expectations** towards these “innovative institutions”, since existing experimentations have so far turned out to be more often a flop and, *there are only a few successful examples of this phenomenon and these institutions claiming to be innovative are usually more at risk of being merely commercial or uninteresting.*

The following graph and table present the classification of the rating in decreasing order. **All in all, the elements of scenarios judged as most likely in 2020 are:**

- ◆ **Specialisation/diversification of education and training providers**
- ◆ **emergence of worldwide and regional interdisciplinary centres of excellence (Civitas, Babelogue)**

- ♦ learning initiatives by E&T institutions more and more linked to the needs of local contexts (regions cities) (Civitas)
- ♦ emergence of innovative institutions as grassroots leaders of change (Babelogue)

Which of the following elements of scenarios do you judge most likely in the year 2020? Please rate from 1 = least likely to 5 = most likely



Which of the following elements of scenarios do you judge most likely in the year 2020? <i>(Please rate from 1=least likely to 6= most likely)</i>	AVERAGE	IQR
Specialisation/diversification of education and training providers	3,8	3-4
Emergence of worldwide and regional interdisciplinary centres of excellence	3,7	3-4
Learning initiatives by e&t institutions more and more linked to the needs of the local context (region, cities)	3,6	3-4
Emergence of innovative institutions as grassroots leaders of change	3,6	3-4
Increased role of public-private partnership in e&t	3,5	3-4
Informal learning through networking emerging as the xxi century learning model, allowing for diversity and dialogue in education	3,5	3-4
Increased value attributed to learning and education and penetration and mainstreaming of Ill as a fully interiorised perspective on life and society	3,5	3-4
Access to tel for all	3,4	3-4
Increased responsiveness of education to stakeholders' needs	3,4	3-4
Increased investment in e&t by private sponsors	3,2	3-4
Trends towards increased privatization of knowledge	3,1	2-4
Access to learning for all	3	2-4
Increased investment in e&t by public funding	3	2-4
Lifelong learning becomes a fundamental right and duty for all citizens of the worls	3	2-4
Globalisation of educational models and curricula	2,9	2-4
Standardised learning solutions and accreditation models worldwide	2,8	2-4
Consolidation of few global learning providers	2,7	2-3
Rejection of internationalisation and decreased flexibility and attitude to innovate by learning systems as a consequence of geopolitical tensions	2,3	2-3

2.4 MOST LIKELY SCENARIO IN EACH LIFELONG LEARNING AREA

This section will provide a graphic visualisation of the results of the survey concerning future scenarios in each lifelong learning area. For each of them, the experts were asked to rate each Learnovation scenario, on the basis on how likely they reckoned it as a spontaneous evolution in the absence of any policy change. As explained in previous section, the only average data for each scenario have been considered, and is provided below. In most of the areas, it is difficult to identify a scenario clearly prevailing on the others.

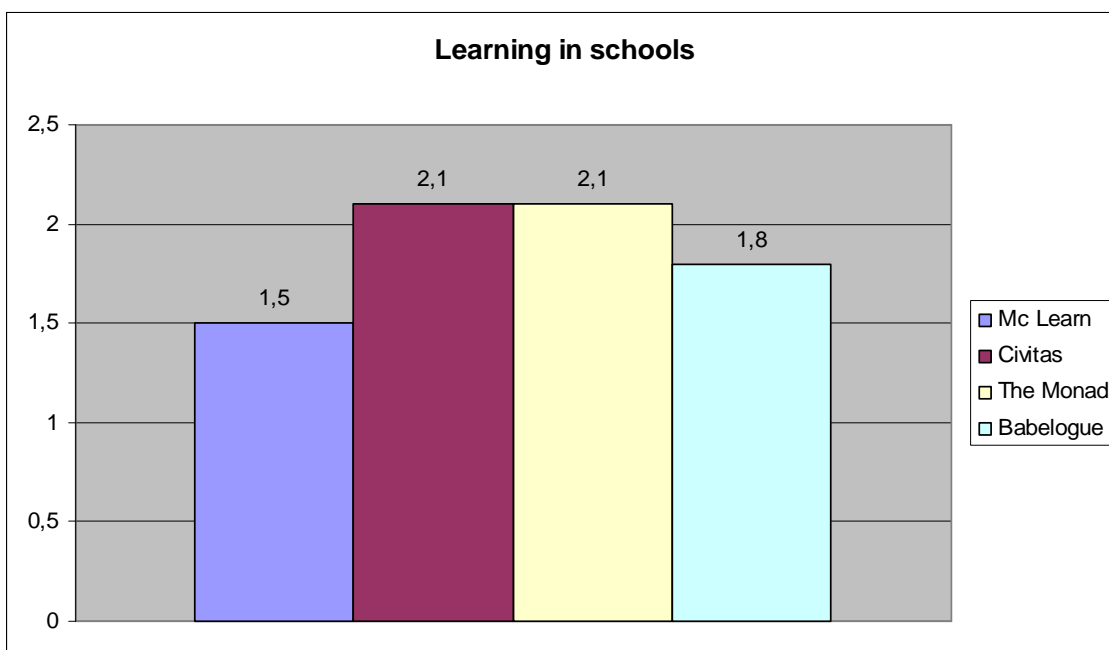
A relevant consensus has emerged in most of the areas, while in a few territories voices of disagreement remain, offering inputs for further reflection.

For the sake of results interpretation, we remind here the four scenarios presented to experts for rating related to the Lifelong Learning areas identified by Learnovation - while a more detailed description is provided in the first chapter of this report.

Convergence		
Inertia	“Mc-learn” Hyper competition of providers on a global scale will lead to a “strive for survival” of learning providers	“Babelogue” The world becomes a global network of learning occasions/spaces available any time anywhere
	Innovation/ pro-activity	Innovation/ pro-activity
Inertia	“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
	Innovation/ pro-activity	Innovation/ pro-activity
Context		

Respondents were asked to rate the feasibility of the four scenarios for each Lifelong Learning area in case no policy was activated in a scale from 1 (less feasible) to 3 (more feasible). The results are presented below, highlighting the most feasible scenario(s) for each Lifelong Learning area.

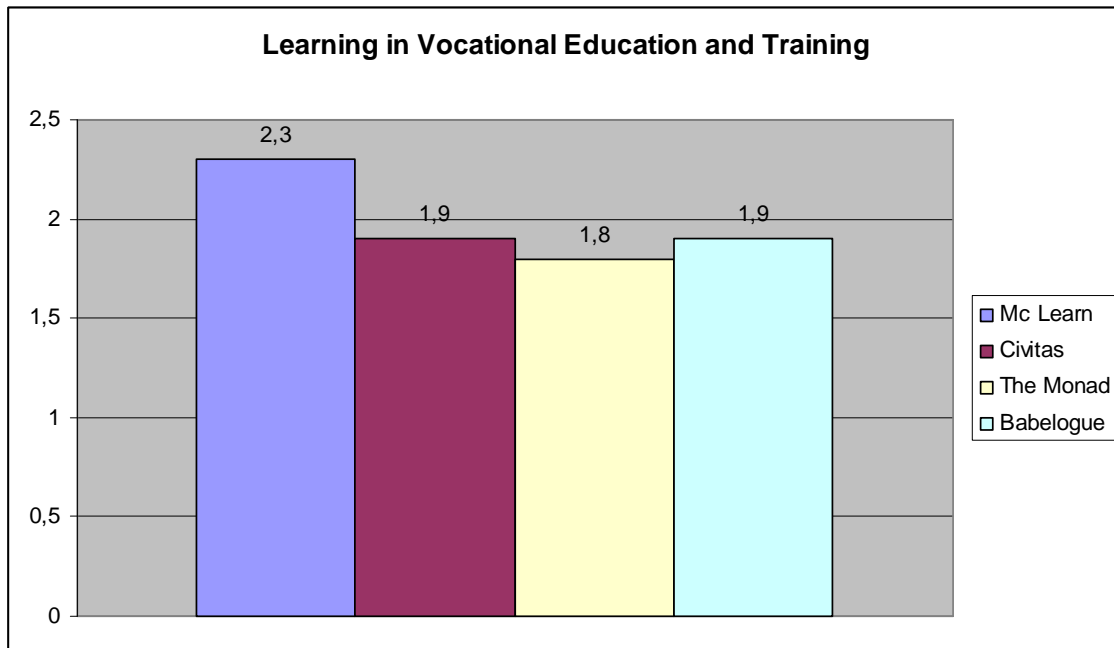
1. Learning in school: Civitas and the Monad



The most likely scenarios rated by respondents 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 influenced by globalisation and internationalisation trends**. Interestingly, the prevailing scenarios get exactly the same average rate (2,1) presenting the two facets of contextualisation: the Monad being more linked to an inertia attitude (and representing therefore a more “negative” scenario) and Civitas (the more positive, or optimistic scenario) implying increased relevance to contextual needs and to the concerns of stakeholders.

Comments provided by respondents in relation to ICT integration in learning in this territory highlight the need to *“stop letting technology drive educational change and challenge the technology to provide what education needs”*.

2. Learning in Vocational Education and Training: Mc Learn

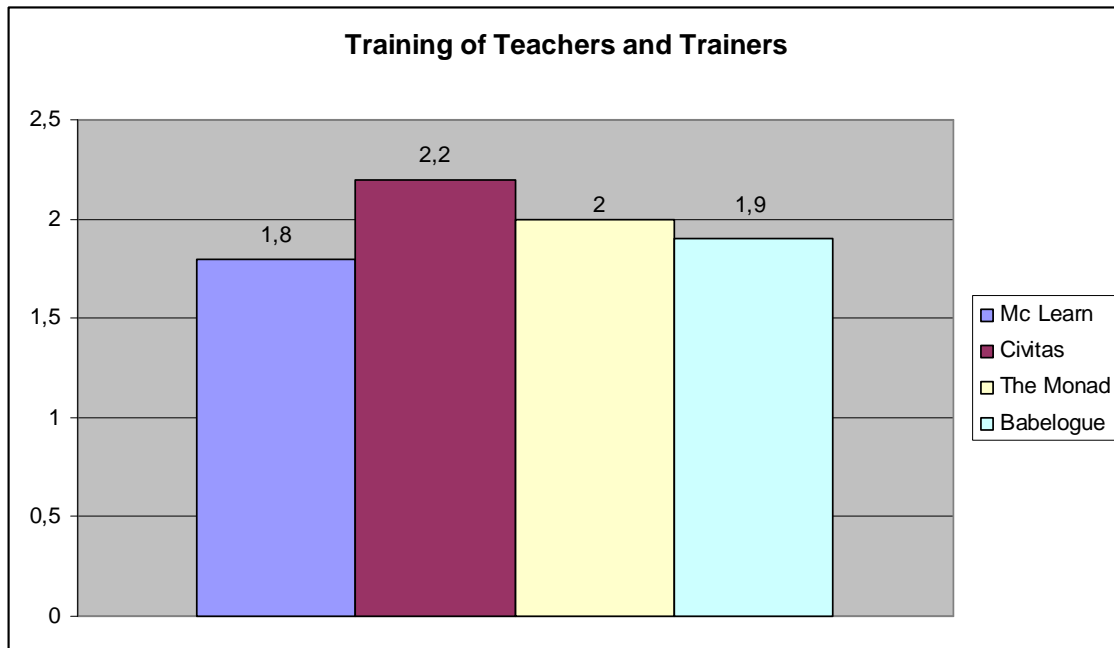


The need to shape tomorrow's generation skills according to the needs of the business world is probably at the origin of the rating on VET, which has resulted into the dominance of the Mc Learn Scenario. In fact, the analysis of the comments provided by respondents does not support the idea of "learning fast foods", but rather the need to:

- ◆ foster public / private and school/company partnerships;
- ◆ assure public and private funding and stakeholders' involvement;
- ◆ ensure bridges and flow of information between ICT for learning providers and institutions able to anticipate skills shortages.

Mc Learn is therefore here interpreted as a scenario where the VET system operates more and more closely and in synergy with the business world, rather than a scenario where quantity prevails over quality or where learning resources are standardised. Instead, priority is given by respondents to personalisation of learning strategies.

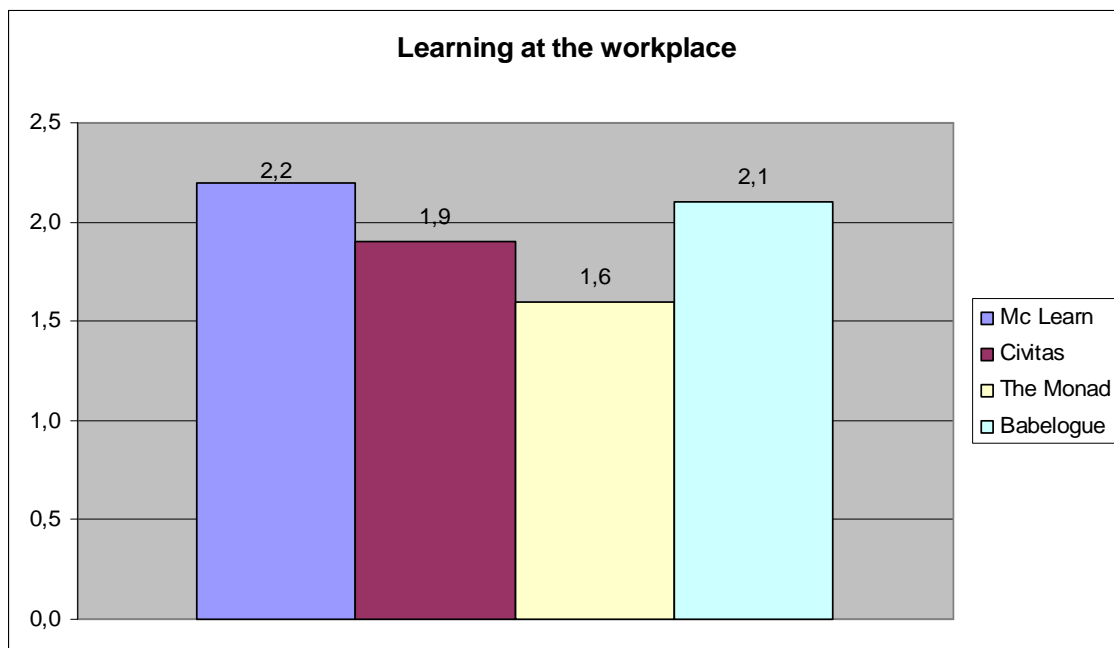
3. Training of Teachers and Trainers: Civitas



In line with the results of school education (but not with those on VET), the CIVITAS scenario is expected as the prevailing one in the future as concerns teachers' training. The following recommendations are provided to reach this scenario, that sees **teachers and trainers as more and more intermediaries and catalysts of change and innovation**:

- ◆ educate teachers to creativity, innovation, self-management, learning facilitation;
- ◆ favour exchange and networking within teachers communities and among the community of 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".

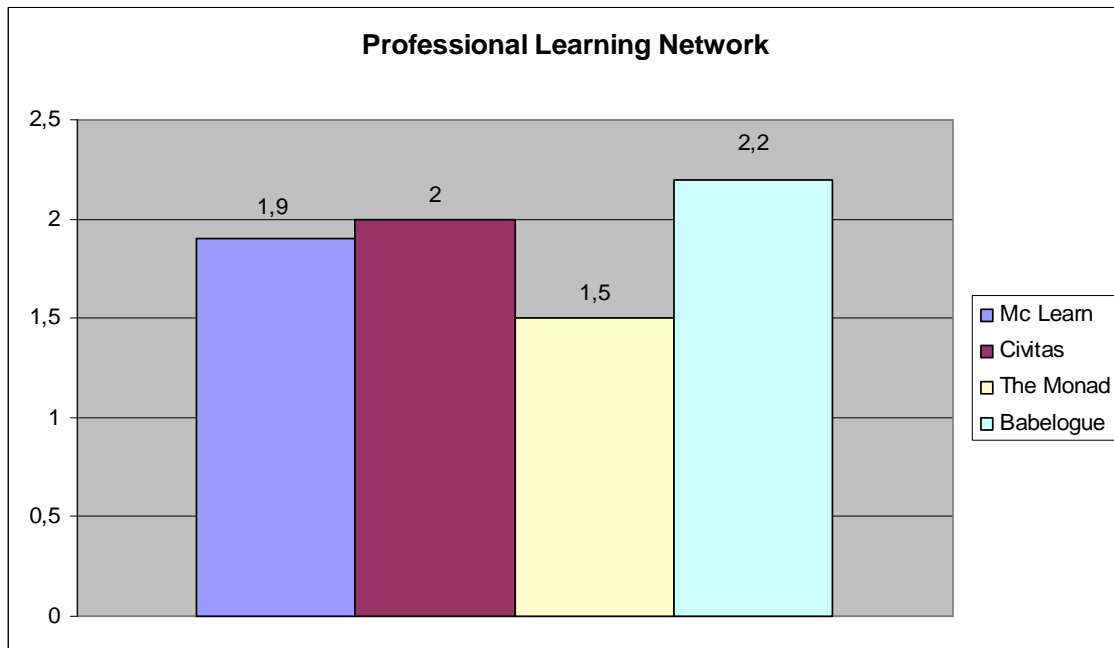
4. Learning at the workplace: Mc Learn and Babelogue



Mc Learn and Babelogue are the prevailing scenarios as concerns workplace learning according to respondents. Both scenarios stand within the convergence trend, implying internationalisation, universalisation and deterritorialisation of learning and of learning value. **As in the case of VET, Mc Learn is not intended as standardisation of learning offer but rather as a more effective management of workplace learning.** Recommendations of respondents related to the future hoped evolution of this territory include:

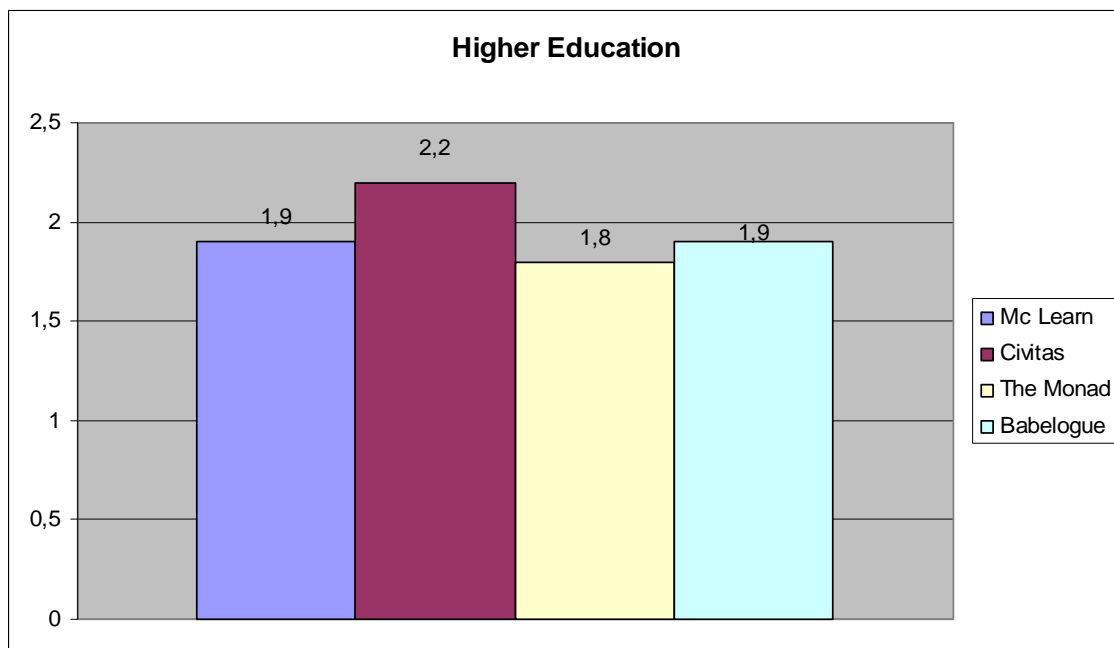
- ◆ increase focus on individual interests beside the company ones;
- ◆ increase role of ethical issues in training;
- ◆ favour public private partnerships aimed at increasing quality of the learning offer;
- ◆ increase focus on soft training;
- ◆ favour flexibility in access to LLL for workers;
- ◆ foster informal learning recognition.

5. Professional learning networks: Babelogue



Babelogue is rated as the most likely scenario for this territory, in consistency with the own nature of the activities run by such networks and implying the creation of networks open to professionals of the same sector at global level to exchange knowledge and experience. As reported below in the territories more related to informal learning (individual development through e-learning and communities generating learning as a side effect) **one of the major concerns is related to quality and reliability** of the information exchanged.

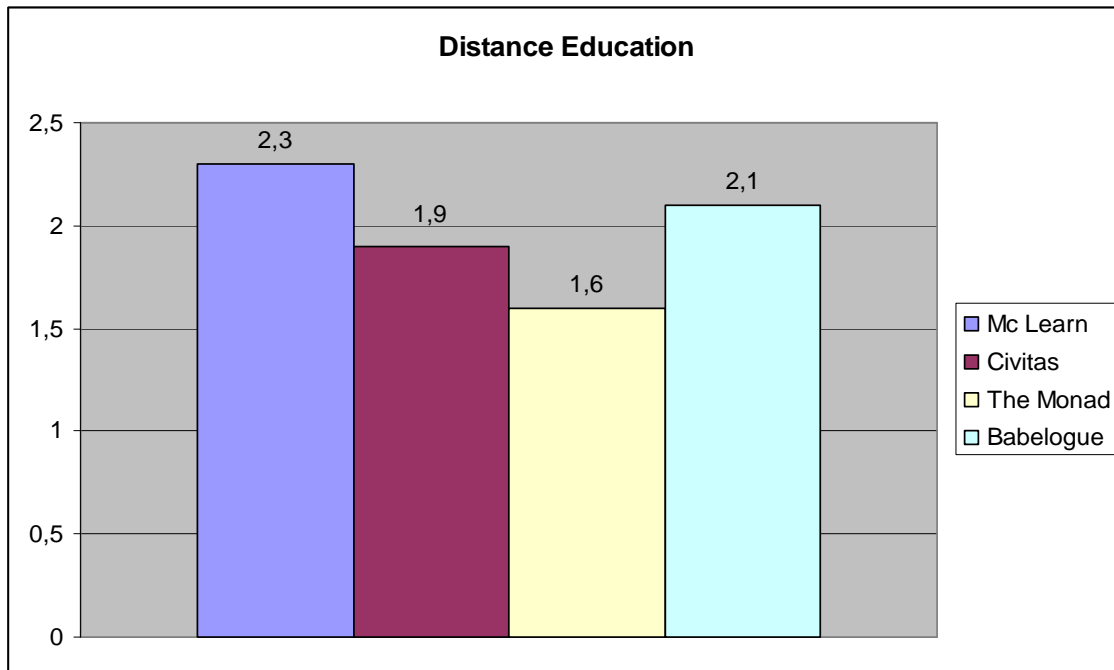
6. Higher Education: Civitas



As evident from the graphical representation above, Civitas was rated as the most likely scenario as concerns higher education. It is interesting to note that the rating of the other three scenarios is quite close to the most rated one, with only 0.3-0.4 points of difference. Looking at the core tensions (contextualisation/convergence and inertia/innovation) 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.** Nevertheless, the **need to increase the international dimension** of HE is stressed by respondents as shown in the list of recommendations below:

- ◆ Favour cooperation on different levels: public/private, with stakeholders, with the local community and its needs, at an international level, among HE institutions (in place of competition);
- ◆ Develop quality assurance and accreditation mechanisms, with a global perspective, and favour the emergence of independent evaluation bodies;
- ◆ Support research in Higher Education in order to lead innovation;
- ◆ Foster ICT as a mean to increase access and to improve learning processes (for instance through simulations and game-based-learning).

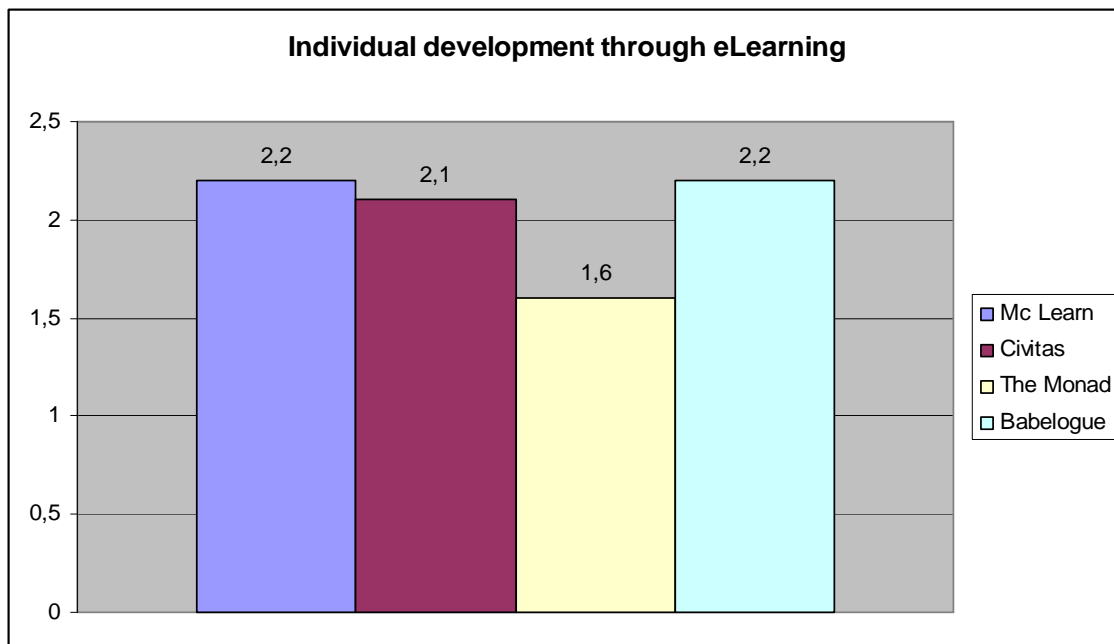
7. Distance Education: Mc learn followed by Babelogue



Mc Learn 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.

8. Individual development through e-learning: Mc Learn and Babelogue, followed by Civitas



This territory presents evolutions linked to three main scenarios, all implying a high degree of dynamism. All the comments and recommendations provided by respondent go in the direction of **supporting individual development as an integration to formal learning processes, rather than “formalising the informal”**:

- ◆ focus on long term personal learning goals and personal development rather than on short term objectives of one’s own workplace
- ◆ embed this type of learning in LLL strategies based on personalised and self developed learning paths by generalising coaching, mentoring and scaffolding and by localizing learning provisions and software features supporting it.
- ◆ favour Civitas by enhancing cooperation with civic organisations in order to develop education valuable to groups of individuals
- ◆ Do not forget emotional intelligence and social skills development as a support to knowledge exchange and communication.

The **need to develop quality assessment mechanisms** is highlighted by one respondent, and it is in fact 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.

9. Communities generating learning as a side effect: Civitas and babelogue



Not surprisingly, the two prevailing scenarios for this territory fall into an innovation/proactivity attitude and share the two sides of the coin of informal learning communities: **orientation to local context and to the international 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.

2.5 MOST URGENT ACTIONS FOR CHANGE

The Learnovation Open Forum, held in Brussels in May 2009, launched the consultation on 26 statements regarding recommended actions to be taken by policy makers and practitioners to implement meaningful innovation processes in learning. Such statements were voted by the 100 experts and policy makers attending the event and resulted in 10 “Imperatives for change” that can be found at the following link: <http://www.elearningeuropa.info/files/lo/LOpress6.pdf>

In order to extend the consultation to the wider community of stakeholders involved in learning innovation, Learnovation launched a consultation on-line on the 26 statements and, in parallel, included the statements into the DELPHI consultation so as to both enrich the foresight exercise as well as to widen the consultation in view of the final elaboration of the Learnovation Manifesto.

The suggestions of the respondents on actions to undertake to avoid undesired evolution in each LLL area, gathered in the first round, have been grouped and included in the list of statements, as further urgent actions for change submitted to the experts’ opinion during the second and third round, following the DELPHI methodology. Consultation with the experts being part of the DELPHI panel led to the identification of 14 additional statements and therefore to a total of 40 statements voted.

The results of the DELPHI consultation on the statements, including quantitative and qualitative pieces of results, is reported in the section below, following the same methodology and graphic representation adopted in this report. In order to ensure more meaningful and easy reading, all the statements, including the 14 additional ones, have been grouped under the four Learnovation clusters, except for those identified as “transversal statements”, and reported in a separated group.

LEARNING IN LIFE OF DIGITAL NATIVES

1. Increase focus on learning processes and attitudes in education

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INCREASE FOCUS ON LEARNING PROCESSES AND ATTITUDES IN EDUCATION	4	3-5	1	0

An overall consensus exists on the importance of increasing focus on learning processes and attitudes in education, with an IQR covering the whole highest side of the scale, and an average rate of 4, with negligible numbers of deviating answers.

It is indeed the extent of this importance and urgency which seems more controversial. Significantly, one of the respondents warns that focusing on learning processes and attitudes **should not be meant as elaborating educational axioms and recipes imposing “the right” learning process**, hereby shifting attention from content to process but sticking to a normative and one-size-fits-all approach.

2. Re-integrate education into real life

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
RE-INTEGRATE EDUCATION INTO REAL LIFE	3,9	3-5	2	1

As for the statement above, respondents position themselves on a much extended range, covering from 3 to 5. It is clear indeed that, while agreement exists on the importance of approaching education to real life, against the isolation effect of a “monad” scenario, not all the experts consider this action of the utmost urgency.

Reading through the associated comments, it seems that the wide nature and general formulation of the statement and its subsequent ambiguous interpretation, could have affected the wide distribution of opinions, as if to say that **if it is difficult to deny the importance of connecting education to life as a general statement, its operative implementation has more ambiguous interpretation and controversial implications.**

3. Encourage diversity in learning processes

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENCOURAGE DIVERSITY IN LEARNING PROCESSES	3,8	3-4	5	5

Not surprisingly, the issue of encouraging diversity in learning processes has raised increasing consensus along two subsequent rounds. While in the first round responses concentrated on a short range from 3-4, stating the importance of this action but removing more extreme positions, in the second round a significant number of respondents reintroduced them, stressing on the utmost urgency of the action.

The unfolding of diversity in learning is deemed to be the milestone of lifelong learning and the only way to achieve true inclusion, and turn out in the development and unfolding of a much broader diversity of skills, competences, performances which will be **beneficial to creativity and society development.**

This process can be supported by the flexibility of ICT, enabling the overcoming of traditional standardized solutions in learning provision.

In encouraging diversity, the learning process has to be considered in a comprehensive manner, and a stronger effort need to be devoted to **support diversity also at the level of assessment.**

4. Ensure that assessment supports learning

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENSURE THAT ASSESSMENT SUPPORTS LEARNING	4	3-5	2	1

Coherently with what mentioned above, the centrality of assessemnt within the learning experience and the need to consider and make it **a fully integrated part of a virtuous learning cycle** has received a significantly high average rate, even if the majority of opinions are distributed on a quite extended IQR, including also more moderated positions.

The formative purpose of evaluation is deemed a pillar in supporting a successful learning process, able to **foster motivation and engagement, especially in an adult learning perspective.**

5. Enhance the innovation capacity of teacher training systems

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENHANCE THE INNOVATION CAPACITY OF TEACHER TRAINING SYSTEMS	4,2	4-5	4	1

Significantly, positions of the respondents on this element have concentrated on the top of the scale, wit an average rate of 4,2, and one only deviating position after two consultation rounds.

Not only looking at this specific statement, but reading through the whole DELPHI survey results, **the “human factor” of the education engine** - meant as the role of teachers, trainers and professionals and all linked to their own training and professional development - **is deemed crucial and in most cases the starting point of any significant change in the system.**

This is meant at both the macro level of policy making, which needs to be committed to invest and refresh teacher training system and its organisation within a holistic reform perspective, and at the micro level of teachers' trainers and teachers' motivation and commitment to embrace innovation and creativity, accepting to open up to new visions of learning and new pedagogical approaches and learning strategies.

6. Challenge technology to provide what education needs, rather than letting technology drive educational change

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
CHALLENGE TECHNOLOGY TO PROVIDE WHAT EDUCATION NEEDS, RATHER THAN LETTING TECHNOLOGY DRIVE EDUCATIONAL CHANGE	4	3-5	3	0

This statement, as the six that follow, has been introduced in the second round among new actions suggested by the respondents to avoid undesired evolution of learning scenario in the future.

Specifically, this statement touches a very relevant issue in the framework of TEL discourse and within the Learnovation approach, that of building the necessary capacity to drive ICT exploitation in education rather than let technology innovation overwhelm the education domain and steer its changes.

Once proposed to the whole panel of experts, an overall consensus has been reached on this statement, with a significantly high average rate of 4.

7. Reduce central control on school

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
REDUCE CENTRAL CONTROL ON SCHOOL	3,3	3-4	6	5

The issue of increasing school autonomy and fostering differentiation by reducing central control results to be more articulated and complex than expressed by numerical results. A quite concentrated IQR highlights consensus on the importance of the element. **School autonomy is intended as the organisational setting able to trigger processes of innovation, experimentation and learning among schools.** However a not negligible number of respondents refuse to align to the majority and for diverse reasons they refuse to completely dismiss the role of the centre.

According to these views, **the centre has and should maintain its crucial role of ensuring equity and equality in access and service provision and cover the function of accountability of the public policy.**

Moreover, a radical shift of balance between central control and school autonomy to be successful requires for a **preliminary reinforcement of school leadership**, against the risk to turn autonomy into a mere organisational settlement deprived of resources/competences to effectively works towards desired direction and lowering and jeopardising quality and equality in education.

All together, controversial results could be interpreted as more complementary rather than opposite. The arising picture could be that of a desirable combination of a centre maintaining a steering function of political leadership and governance, ensuring both material and immaterial infrastructure to implement successful school autonomy, while avoiding more direct intervention which could hamper both more localized solutions and bottom up micro-innovation and diffusion through horizontal communication, exchange and peer learning.

8. Give value to difference in learning process, beyond mere tolerance

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
GIVE VALUE TO DIFFERENCE IN LEARNING PROCESS, BEYOND MERE TOLERANCE	4,1	4-5	6	1

Not surprisingly, this statement has received a very high rate, with an almost complete consensus after two rounds concentrated on the top rank of the scale. The issue is in line with an overall acknowledgment of the importance of growing attention to personal learning styles, features of the learner, tailor made solutions and valorisation of each persons' own aptitudes, against one-size-fits all solutions hampering a fully fledged implementation of lifelong learning in its more authentic meaning.

A more insightful look reveals that this statement, so highly rated, foresees a **scenario which sharply reverses traditional educational paradigm, still maintaining clear-cut borders between “the othodoxy” and what is deviating but to be included/accepted, looking ahead towards a new vision of learning whose borders, contents and means are truly open to be designed on a flexible basis starting from the competitive advantage of difference** among people, rather than from the definition of personalised paths meant as adapted/facilitated versions of the mainstream one.

9. Devolving responsibility and governance to community and stakeholders and share a common vision of Learning

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
DEVOLVING RESPONSIBILITY AND GOVERNANCE TO COMMUNITY AND STAKEHOLDERS AND SHARE A COMMON VISION OF LEARNING	4	3-5	2	0

Once again, the focus on “devolution”, meant as increasing the role of local communities in terms of governance and responsibility in education broadly intended, raises positive evaluation, but extended on a 3 points IQR. This evidence confirms that the issue is sensitive, as **it touches a core tension between an undeniable acknowledgement of the importance of more locally defined solutions/systems and the value still paid to central authorities as guardians of equity/equality of provision and loci of political and economic accountability.**

Looking to numbers, it is indeed hard to speak of the urgency of a radical and complete devolution to local communities, rather a consensus is observable on the importance of this layer as the one where to tune more tailor made and context based vision of learning and subsequent micro/local policy planning. The message which could be gained is that top-down and centrally defined solutions are no longer successful in strategic terms, but while some consider organisational devolution as pivotal for innovation in learning system, for others it represents a complementary measures among more urgent undertakings related to other dimensions of action.

10. Foster public/private and school/company partnerships

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
FOSTER PUBLIC/PRIVATE AND SCHOOL COMPANY PARTNERSHIP	3,1	2-4	0	3

Fostering cooperation and partnerships between the public and private sector in education, namely school/company partnerships, clearly results in **a highly controversial matter**. The majority of the respondents position themselves on a range covering the middle of the scale, meaning that both quite low rates as well as quite high ones have been expressed on the same issue, as also the average rate of 3,1 confirms.

The criticality of the issue is furthermore confirmed by those opinions falling out of the IQR, which are of opposite signs: if for two respondents increasing and strengthening these kind of partnerships is pivotal, an other expert registers an inner antithesis between the public and the private sector, as holders of intrinsically opposite interests, namely the public good and the individual profit, which are deemed hard to completely reconcile. In this understanding, the private sector cannot be trusted completely in education, meant as a public good.

As these opinions show, **the issue is highly political and very sensitive, as it touches the broader and endless societal concern around which is the desired balance between the public sector and private/market mechanisms in delivering public goods** and pursuing socially relevant goals, reflecting a variety of political beliefs and weltanschauung underpinning them.

11. Strengthen the individual and promote ownership of the learning process, beyond specialist and technical skills

			2 round	
Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	CONV.	DIVERG.
STRENGTHEN THE INDIVIDUAL AND PROMOTE OWNERSHIP OF THE LEARNING PROCESS, BEYOND SPECIALIST AND TECHNICAL SKILLS	4,1	3-5	1	1

With an average rate of 4,1, this statements has received a significant high rate, which finds a correspondence throughout the survey results in the **desirability of a scenario in which the learning process is more a more built around the person and individually mastered** thanks to the development of control capacity on one own lifelong learning path.

In this vision, the mission of education should go beyond the delivery of technical and specialist instructions, though these are crucial in an employability perspective, and be devoted to a more holistic development of the individual, **enabling him/her to be master of his/her learning process and able to orientate in a complex and various learning ecosystem, with an endless - and not necessarily quality-assured – offer**, in terms fo modalities, contents and providers.

A quite extended IQR shows that the urgency of this action in the short term is more controversial.

12. Educate teachers to develop for him/herself and for the learner creativity, innovation and self-management

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
EDUCATE TEACHERS TO DEVELOP FOR HIM/HERSELF AND FOR THE LEARNER CREATIVITY, INNOVATION AND SELF-MANAGEMENT	4,6	4-5	3	0

This element, proposed by the respondents in the first round, and referred to teachers preparation is **deemed of the utmost importance with a complete consensus** concentrated on the top rank of the scale and the highest average rate reached by the statements (4,6).

This result is consistent with the importance paid by experts in general to teacher preparation and specifically, quoting statement n.5, to “enhancing the innovation capacity of teachers training system”.

The statement refers specifically to the importance that teachers first adopt creativity, innovation and self-management for themselves so as to be able to mainstream them in the learning process and guide the learners to develop them as well. The impressive rate achieved by this statement in its specificities compels to **pay the utmost attention to the teacher preparation dimension, which seems to be in the experts’ opinion crucial to any desired evolution in the education scenario, despite any change undertaken in other dimensions.**

CHANGING RELATIONSHIP BETWEEN WORKING AND LEARNING

13. Encourage all forms of learning at the workplace

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENCOURAGE ALL FORMS OF LEARNING AT THE WORKPLACE	3,7	3-4	4	4

There is an overall agreement on the importance of supporting learning in the work context. In this framework, it is considered quite important by the majority of the respondents that all forms of learning are encouraged at the workplace, beyond more traditional ones. Those who refuse to align deems the action even more urgent, as, using the words of an expert, *traditional form of learning will need to be more flexible in order to offer the range of opportunity required in the workplace of the future.*

In another more socially oriented interpretation, learning at the workplace is considered the **key to social mobility**, as it is the very democratic mean through which people can move upward, despite any socio-economic origin and their starting position in work hierarchies.

14. Embed learning into organisational change

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
EMBED LEARNING INTO ORGANISATIONAL CHANGE	4	4-5	4	2

As a further acknowledgement of an indissoluble linkage between learning and working, requiring further conceptual effort of explicitation and concrete encouragement, this statement has received a very high rate, demonstrating that **the relationship is twofold: not only people learn through working, but learning must be seen as a key resource to trigger/direct organisational change**, and support successful and goal-oriented restructuring of organisations.

In a post-industrial society, economic/social threats and opportunities are assumed to lie within human capital development and the management of flexibility and change, thus learning can represent the resource to cope in the meantime with both exigencies and feed both processes in a virtuous circle.

However the action refers to a **very strategic and long- term process, requiring change both at the micro level, in the strategic management of the single organisation and, as a catalyst, at the macro level of shared cultural scripts and value acknowledged to learning at work, also accepted in its organisational democracy potential**, as bottom up driver of innovation in the workplace of the future. Here, the top-down pyramidal organisation and the traditional chain of command of the fordist factory seem to hamper and contrast with a new profitable approach based on human capital contribution.

For these reasons, perplexity have been expressed by the respondents on the strictly operative consequences of such an action for change, which could sound both of a difficult implementation in the short term and overambitious in its formulation, when realistically considering **how far most of workplaces' mindset and organisation are still lagging behind desirable evolution**.

15. Celebrate and recognize learning achievements in the workplace

			2 round	
Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	CONV.	DIVERG.
CELEBRATE AND RECOGNIZE LEARNING ACHIEVEMENTS IN THE WORKPLACE	3,5	3-4	2	5

Not surprisingly, a general consensus exists on the importance for organisations to adopt a human resource development approach including an explicit commitment to recognize and value the results achieved by their workers. It would be on the other hand difficult to object on the general content of this statement, that of encouraging workers in their development path, so as to foster motivation, loyalty, trust and the development of a learning culture within the workplace.

However such a broad vision raises in turn once again **perplexities about its operative translation and feasibility, especially considering the specific exigencies of work contexts, where an intrinsic limited amount of time and resources is to be devoted primarily to achieving specific goals**, making it difficult to imagine concrete possibilities to fully embrace a learning oriented attitude, constantly focused on rewarding individual achievements. In the view of one of the respondents, **learning at work needs therefore other leverages**, more consistent with the features of and realizable in the context of a non-primarily learning oriented organisation (e.g. the individual contribution in the achievement of the organisation's objectives).

Another issue raised by one expert **warns from the risk to turn this action in a counter productive one, setting internal benchmarking mechanisms which push to celebrate only "the best achievers"**, according to some internal standards, **instead of recognizing and rewarding everyone's strengths** and progresses related to diverse levels of professional development within the same organisation. This would in turn jeopardize possibility to fully discover and exploit the diverse potentialities of the human capital existing within the organisation, hampering both internal efficiency and flexibility/transformation capacity nowadays required to survive in an everchanging market.

16. Remember diversity and differentiation of learning needs and styles of workers

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
REMEMBER DIVERSITY AND DIFFERENTIATION OF LEARNING NEEDS AND STYLES OF WORKERS	3,5	3-4	5	5

Not surprisingly, the theme of acknowledging and respecting diversity and differentiation in learning needs/styles has received quite a high rate also when referred to learning at the workplace, i.e. addressing workers rather than students. Numerical results are in line with those obtained on corresponding actions concerning explicitly learning-oriented domains (school, VET and teacher/trainer training), namely “encouraging diversity in learning processes”, and “give value to difference in learning processes beyond mere tolerance”. Equally not surprisingly, the average rate is in this case a bit lower. As already mentioned, **implementing desirable visions of learning in the work context is in general deemed less feasible and hindered by the substantial differences and structural limits of work organisations in respect to formal education environments.**

However, it is worth stressing that a not negligible number of respondents are highly convinced that this action is of the utmost urgency within the workplace, where **adult workers, for their being adult, have different experiences and backgrounds which is pivotal to take into account.** Respecting these differences is considered the key to foster motivation to work and to engage in learning effort within and beyond the workplace, encouraging also those who went through bad experiences within the formal education system, in a sort of “second chance” perspective.

17. Encourage informal learning beyond the limits of one working organisation

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENCOURAGE INFORMAL LEARNING BEYOND THE LIMITS OF ONE WORKING ORGANISATION	3,6	3-4	9	3

In a lifelong and lifewide learning perspective, learning must be seen as a life activity extending beyond the borders (of both space and time) and the specific objectives/fields of activity of one’s workplace. This vision is consistent with an **emerging scenario in which the “the job for the life” disappears, and individual “professional narrations” substitute static identifications with a lifelong lasting job profile**, with borders between formal and informal spaces for working/learning/living fading, together with increasing aspirations of the individuals to master their interrelations within a self-managed development path.

Within this view, at a more operative level, one of the respondents imagines the definition of *an indicator of successful education motivating to learn beyond what is formally required*.

18. Do not forget the contribution of learning in the strategic goals of organisation

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
DO NOT FORGET THE CONTRIBUTION OF LEARNING IN THE STRATEGIC GOALS OF ORGANISATIONS	3,4	3-4	8	4

This action falls within a wider perspective, looking at **human capital as “the” very productive and competitive factor of a post-fordist integrated society**, increasingly shifting towards knowledge-based economy and immaterial production of ideas as drivers of innovation and value multipliers.

The awareness of such a structural transformation of society supports and is coupled with an increased attention to learning and human resource development as strategic assets of any organisation willing to be successful in the long-run.

Within this opinion, the majority of the experts reckon **crucial for the top management to pay explicit commitment to the learning dimension within their organisation as an investment, rather than a burden**.

On the other hand - and in more practical and may be realistic terms - there is no way to foster and push forwards learning at the workplace out of an explicit effort on the part of the property/management, coming from a grounded belief that learning will substantially contribute to solve contingent strategic and organisational problems.

Strategic support, meant both in terms of resources investment and attitude, is pivotal for learning to be embedded in the organisation context and its goals, in spite of turning into a perceived meaningless/irrelevant activity from both sides (the organisation and its workers), or even disappearing in any form from the workplace.

This deep conviction has pushed some respondents to stick to a 5, which marks this action as a priority imperative for change.

19. Focus also on soft training at the workplace

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
FOCUS ALSO ON SOFT TRAINING AT THE WORKPLACE	3,7	3-4	1	² PLUS 1 N.A.

Transformations and deconstructions occurring in the labour market coupled with the acknowledgment of uncertainty and change as structural context conditions in which organisations are compelled to act, increase **focus on functional flexibility and adaptability of workers, shifting attention from fixed job identities, roles, tasks and work processes to areas of competences, including both hard and soft skills**. The latter have a transversal character, as they address social, communicative and organisational abilities which complement more specialist and technical ones but also enable the required flexibility and cooperation within and among organisations.

Neglecting the aforementioned soft dimension is deemed a strategic mistake by the majority of the respondents, since its unfolding greatly influences *the development of an institution as an organisation and contribute to the development of a work culture*, incentivising overall quality of work and organisation's outputs.

More controversial is how this increased attention to the soft dimension should be translated into operative action, and **to what extent it should take the form of a formally delivered training or being embedded into organisational dynamics**.

20. Encourage the business community to adopt learning as a priority in its strategic development and change management approaches

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ENCOURAGE THE BUSINESS COMMUNITY TO ADOPT LEARNING AS A PRIORITY IN ITS STRATEGIC DEVELOPMENT AND CHANGE MANAGEMENT APPROACHES	4,2	4-5	3	0

The IQR, average rate and degree of consensus achieved by this statement is impressively high and it immediately reminds to the equally high results obtained by the action "embed learning into organisational change". They both refer to priorities of a highly strategic level, framed in **an innovative weltanschauung which adopts learning, broadly intended, as the lens through which reading change as well as the driver able to produce and steer it**.

Results of this specific item confirm consensus on a set of specific priorities covered by other neighbouring statements, namely:

- ◆ **Organisations first have to acknowledge the value of learning** so as to enable its successful implementation in the workplace. The urgency felt on this issue suggests that so far not enough has been done and achieved in this direction;
- ◆ This implies **understanding that there will be a ROI** (return on investment) in learning
- ◆ While formal training is unquestionably important, **learning should be intended in a more mainstreamed and embedded perspective, as a process which physiologically happens**, and as such can also be led and exploited in desirable directions to help the development of organisations.

21. Free networks from any commercialization (advertising and commercial purposes)

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
FREE NETWORKS FROM ANY COMMERCIALIZATION (ADVERTISING AND COMMERCIAL PURPOSES)	3,1	2-4	4	0

This action has been drawn from suggestions of the respondents on how to avoid undesired evolutions in the specific territory of professional learning networks.

Submitted to the whole panel of experts, the statement was to some extent provocative, as it asked to take position with respect to a quite sharp-cut proposal. This was in turn an interesting exercise to explore positions on a relevant aspect, around which opinions were more expected to polarize, rather than to simply stress more or less urgency of statements which are hard to completely object.

As expected, nonetheless interestingly, the IQR resulted from this specific rating exercise covers the middle of the scale, confirming that both agreement and disagreement have been almost equally expressed on the issue. It is not a case that **this statement touches once again the desirability of a role for private/market forces in the learning domain**, even if at a much more micro-level and in a less sensitive learning territory than that of school and formal education. However, even at this level, **it is highly controversial if and which role should market forces play in learning's spaces.**

22. Support informal and non formal networks creation within each workplace and community

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
SUPPORT INFORMAL LEARNING AND NON FORMAL NETWORKS CREATION WITHIN EACH WORKPLACE AND COMMUNITY	3,9	3-4	2	1

Experts consider a **desirable development** that informal and non formal networks come to life within the workplace and within communities, as **they are entrusted to be profitable complementary loci enabling learning and fostering development, motivation and commitment through cooperation and exchange.**

It would be interesting to understand what degree of intervention implies “supporting” their creation, and whether stating that the action should be limited to a supportive one has been crucial in raising such a high rate.

NEW HORIZONS FOR HIGHER EDUCATION

23. Integrate ICT discourse into the broader European Higher Education discourse (including Lifelong Learning and the Bologna process)

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
INTEGRATE ICT DISCOURSE INTO THE BROADER EUROPEAN HIGHER EDUCATION DISCOURSE (INCLUDING LLL AND THE BOLOGNA PROCESS)	3,5	2-5	1	0

Interestingly, opinions have distributed on a very much extended IQR, covering from 2 to 5, which highlights that both very low and very high importance is paid to this specific action, and also justifies the absence of any deviating opinion after two rounds.

Likewise the average rate confirms the balance of this distribution, as it falls exactly in the middle of the aforementioned IQR.

24. Make sure Higher Education quality assurance process require innovation

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
MAKE SURE HIGHER EDUCATION QUALITY ASSURANCE PROCESS REQUIRE INNOVATION	3,7	3-5	4	3

Generally, experts acknowledge the desirability of HE quality assurance mechanisms able to trigger innovation. Though, there is no a sharp-cut consensus on the urgency of this specific action in the HE scenario, as the quite extended IQR shows. Moreover, a few respondents stick to a deviating position for which a lower importance should be paid to this element.

Specifically, according to one expert, the feasibility and desirability of imposing innovation, through quality assurance process whose requirements are defined from outside is questionable and suffers of a certain ingenuous mechanismism. In this view, **the stimulation of the process would be better rather than its imposition, counting on the fact that market forces and competition will lead anyway to put innovation among priorities and quality markers.**

In a more path-breaking interpretation, it is exactly the notion of innovation within a quality assurance perspective which should be put under discussion since *innovation is not a value in itself, but a step towards improvement.*

Which role/position will indeed it occupy in quality assurance mechanisms and how?

25. Exploit the potential of ICT as enabler of quality enhancement, of innovation and of equity in Higher Education

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
EXPLOIT THE POTENTIAL OF ICT AS ENABLER OF QUALITY ENHANCEMENT, OF INNOVATION AND OF EQUITY IN HIGHER EDUCATION	3,5	3-5	7	1

Interestingly, there is a slight differential when confronting the results of this statement and of the one referring to integrating ICT discourse in the HE discourse at large. Significantly they refer to different levels of implementation, the former being of a more micro-level, while the latter dealing with the macro level of policy making.

While a general consensus exists by now on the actual potentialities of ICT as enabler of quality enhancement, innovation and equity in HE, including experts which consider their exploitation among the highest priorities, undertaking more political actions in the field by stressing on ICT discourse in HE is more controversial, including also very low rates on priority level which could be linked to the approaching of the “invisible technologies” era in education.

It is fair stressing however that, also in this case an extended IQR highlights a certain distribution of opinions, within which an average rate of 3,5 suggests that most of them are concentrated around the middle of the scale, rather than on its top.

26. Use the potential of virtual mobility to democratise access to Higher Education on an (inter-)national level

			2 round	
Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	CONV.	DIVERG.
USE THE POTENTIAL OF VIRTUAL MOBILITY TO DEMOCRATISE ACCESS TO HIGHER EDUCATION ON AN (INTER-)NATIONAL LEVEL	3,4	3-4	10	6

The exploitation of virtual mobility in democratising access to Higher Education is judged as important by the majority of respondents, with a significant concentration of opinions on a 2 points IQR and most of deviating positions sticking to a 5.

This result provides also a **positive feedback on the implicit information given by the statement, that is the actual potential of virtual mobility to enable access to Higher Education**, both on national and international level.

It is basically on this issue that most of deviating opinions have concentrated, by insisting on the priority of pushing virtual mobility as the main cost-effective facilitator of universal access, meant also in all its virtual, non F2F, meanings.

27. Support the integration of informal learning in Higher Education using social networking technologies while avoiding institutional invasion of student space

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
SUPPORT THE INTEGRATION OF INFORMAL LEARNING IN HIGHER EDUCATION USING SOCIAL NETWORKING TECHNOLOGIES WHILE AVOIDING INSTITUTIONAL INVASION OF STUDENT SPACE	3,3	3-4	6	2

In general, that of the relationship between informal learning and HE is a quite controversial issue, as it binds together traditionally distant worlds, namely that of experience and that identified with the highest degree of abstraction, theoretical thinking and specialization: the academic world of higher education and research. In trying to build bridges between the two, as currently happening at increasing level in experimentations and refraining in both educational research and policy discourses, still very diverse opinions are maintained by experts.

Holders of opposing views argue from one side that it is not desirable nor feasible to “formalise and colonize informal learning”, by trying to impose or guide it, and from the other side raises concern about contamination of academic knowledge on the part of informal learning. Things are however moving in the ivory towers.

Therefore not surprisingly, the statement has obtained an average rate of 3,3 on a 5 point scale. More interesting is that consensus is however quite concentrated on a two point IQR, stating that the specific action proposed is deemed quite important. The statement suggests in fact to complement formal higher education with the means offered by social network technologies, by supporting their use *while avoiding invasion of student space*. **This complementary role attributed to social networking technologies fulfils a double goal.**

- On the one hand it has a formative purpose and **enriches the learning process of the specific HE institution, opening it up to the wider world**. As suggested by one of the respondents, it encourages students’ self-management and development of their own learning process and gives the chance to gain *a variety of inspiration from all over the world to be shared locally*.
- On the other hand the learning process is integrated and complemented by **an activity which runs parallel to the formal one, in terms of subjects involved, contents and rules, hereby avoiding colonization on the part of institutional forces**.

28. Stimulate the development of relevant, innovative Higher Education curricula and develop appropriate indicators

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
STIMULATE THE DEVELOPMENT OF RELEVANT, INNOVATIVE HIGHER EDUCATION CURRICULA AND DEVELOP APPROPRIATE INDICATORS	3,5	3-4	6	4

According to the majority of respondents, stimulating the development of relevant, innovative HE curricula and related indicators is an important action to undertake, when willing to embrace an innovation-oriented approach. A certain number of respondents would appreciate more effort to be put on innovation addressed through this dimension. **In a strongly human capital and education centred perspective, they believe that refreshed, innovative and relevant higher education curricula will produce new high level/quality professional profiles able to foster socio-economic innovation and development.**

Refusing this effort of review will instead hamper dynamism from the very beginning since all the high rank jobs will be always the same as required/defined by traditional HE provision that regulate them and set their contents.

29. Universalise distance education and digital content as a learning utility, through public commitment, public/private cooperation and quality assurance development

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
UNIVERSALISE DISTANCE EDUCATION AND DIGITAL CONTENT AS A LEARNING UTILITY, THROUGH PUBLIC COMMITMENT, PUBLIC/PRIVATE COOPERATION AND QUALITY ASSURANCE DEVELOPMENT	3,8	3-5	2	3

The universalisation of distance education/content as a learning utility is in general perceived as a desirable achievement, although experts pay different degree of importance to its implementation, with some deviating opinions explicitly refusing it as a priority at present time.

A specific accent is put by an expert on the **accessibility goal of distance learning**: in this view, effort for universalisation should be primarily informed by a commitment to ensure basic access to education, but also to the **creation of a veritable learning ecosystem**, ensuring universal availability of a complete supply of learning modalities (F2F, distance learning or hybrid systems), chosen by the learner on the basis of his/her preferences, aptitudes, possibilities, structural condition/barriers (both individual, context-related and geographically biased).

30. Utilise ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a tool for developing and accessing knowledge repositories

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
UTILISE ICT AS A SUPPORT FOR COLLABORATIVE EXCHANGE AND COOPERATIVE CONSTRUCTION OF KNOWLEDGE, RATHER THAN AS A TOLL FOR DEVELOPING AND ACCESSING KNOWLEDGE REPOSITORIES	4,3	4-5	4	0

Not surprisingly, this action has obtained a veritable success and a full consensus. Actually, the statement belongs to those formulated in the second round of the DELPHI survey, thanks to the inputs provided by respondents in the first questionnaire submission. This kind of statements, as other suggested by the respondents, refers to the necessity to design well-tuned strategies for ICT exploitation in learning, beyond too general declarations on their potential in broadly supporting education at large.

In this sense, they are particularly meaningful within the Learnovation approach and their relevance in the experts' opinion confirms that **ICT-lead innovation and TEL are deemed to require more strategic definitions to fully exploit their potential and fulfil desired goals, hereby moving towards innovative scenarios in LLL implementation.**

Within this framework, this specific statement deals with a very sensitive and up-to-date topic, that of knowledge management systems and cooperative construction of knowledge. **The consensus reached on this statement reflects the ongoing passage from a first generation "infrastructural" view of ICT as content repositories to a web 2.0 approach, which is by now broadly accepted but still lacks more systemic implementation.**

LEARNING INDIVIDUALS AND LEARNING COMMUNITIES

31. Bring informal learning into the policy spectrum

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
BRING INFORMAL LEARNING INTO THE POLICY SPECTRUM	3,5	3-4	7	5 <i>Plus 1 n.a.</i>

According to the majority of experts, it would be important that the informal learning issue enters the political agenda, so as to be embraced/explicitly taken into account within policy discourse and policy strategies.

Most of deviating opinions stick to a 5, convinced that bringing informal learning into the policy spectrum is among most urgent priorities. Specifically, **policy should focus on:**

- ◆ the **social role of informal learning as a “second chance”** to engage in learning processes after bad experiences in formal education and
- ◆ the political acknowledgement of **informal learning as a key productive factor** in the knowledge economy.

Caution is however as usually suggested when dealing with institutionally approaching informal learning: in this view, the role of policy should be limited at ensuring recognition of experience, **without intervening directly into the informal learning domain, but fully recognizing its existence and relevance** in people lives and its no-longer negligible crucial role for social and economic development.

32. Address quality issues in informal learning, but respect its specificity

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ADDRESS QUALITY ISSUES IN INFORMAL LEARNING, BUT RESPECT ITS SPECIFICITY	3,3	3-4	6	4

Not surprisingly, the issue of quality in informal learning results to be a quite controversial one. The overall result on this statement is positive, with the majority of opinions concentrating on a discretely high IQR and an average rate of 3,3. What is more interesting is to look at the wide distribution and variety of opinions remaining out of the IQR.

A very sharp-cut position states that, given the nature and features of informal learning, quality assurance mechanisms make no sense at all in this domain.

From an opposite view, the introduction of some kind of quality assurance mechanism is perceived as **urgent and a very up-to-date issue in the informal learning domain, as it is by now becoming the source of a lot of innovative and market relevant professional profiles.** It remains however the belief that informal learning requires a **different definition of quality assurance**, more tailored on its own specificities, and based for instance on social rating and learners' evaluation (**social approaches**). The assumption underpinning this opinion is that **no official body, intrinsically tied to bureaucracy and procedures, would be able to keep the pace with the inner fluidity and the uncatchable borders of informal learning.**

Respecting the specificity of informal learning seems indeed the key of success of this statement, requiring in turn to **accept to put under discussion the definition of quality assurance itself as we know it so far.**

33. Make recognition of informal learning outcomes a reality for all

			2 round	
Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	CONV.	DIVERG.
MAKE RECOGNITION OF INFORMAL LEARNING OUTCOMES A REALITY FOR ALL	3,5	3-4	6	4

Moving from statement of principles to generalised/mainstreamed and diffused practice in the field of recognition of informal learning outcomes is an important effort to undertake, according to the majority of opinions.

Not surprisingly, the recognition of informal learning, as of all forms of learning, is deemed a major dimension of action within a lifelong/lifewide learning implementation effort.

It is however important to stress that a few respondents have expressed a rather opposite opinion on this specific statement, by sticking to a very low rate associated to the low urgency and in some cases desirability of the action formulated as such.

34. Help teachers and trainers to recognise and respect the value of informal learning

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
HELP TEACHERS AND TRAINERS TO RECOGNISE AND RESPECT THE VALUE OF INFORMAL LEARNING	3,7	3-5	2	2

This statement deserves careful attention, since it binds together two relevant dimensions within the framework of the survey and of the wider surrounding consultation: training of teacher and trainers and informal learning recognition.

Specifically this action is about supporting and stimulating a positive attitude on the part of teachers and trainers towards informal learning, as an existing and valuable dimension which complements and runs parallel to the education they deliver within the borders of the formal learning space. As data shows, the majority of respondents basically agree on the importance of this action, even if opinions are distributed on a quite wide IQR. Therefore, there is not a sharp-cut consensus on the importance and urgency of such an action, and both medium position and very high ones have been expressed.

Furthermore, according to one of the respondents, a more tuned definition of the statement should be proposed, so as to enable the following understading of the action: teachers and trainers should be helped to include in their daily work and in the learning strategy an effort to know more about their learners and their experience background.

35. Campaign for Lifelong Learning as a flagship initiative for a creative and innovative Europe

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
CAMPAIGN FOR LLL AS A FLAGSHIP INITIATIVE FOR A CREATIVE AND INNOVATIVE EUROPE	3,4	3-4	3	9

The importance of campaigning for lifelong learning as an explicit dimension of effort towards innovation and creativity results to be **highly controversial**.

While in the first round the majority of opinions fell in a positive and concentrated IQR, a remarkable number of respondents refused to align in the second round, reintroducing more extreme positions.

An insightful look highlights that **both very high support and enthusiasm and complete scepticism are expressed** by the respondents with regards to LLL campaign as a relevant and profitable strategy.

The potential impact of such an action is deemed the highest in the opinions of those who strongly believe that raising individuals' as well as stakeholders and policy makers' awareness is the key to foster LLL and unfold its potentialities. On the contrary, some claims for more substantial actions, considering campaigning just as a good-looking but empty strategy.

36. Focus on long-term personal learning goals, rather than on short-term objectives proposed by someone else

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
FOCUS ON LONG-TERM PERSONAL LEARNING GOALS, RATHER THAN ON SHORT-TERM OBJECTIVES PROPOSED BY SOMEONE ELSE	3,8	3-4	3	1

The action, proposed in the second DELPHI round on the basis of the suggestions gathered from respondents, insists specifically on **identifying and supporting an adequate balance/mix of the two components of the individual lifewide learning experience/effort:**

- ◆ one's own personal learning goals, concerning the long-term of a lifetime, and
- ◆ the **contingent learning objectives proposed by outside** and concerning the short-term, one has to cope with and fulfil in different life domains attended (work, education and training, sport etc.).

Consistent with a lifelong learning perspective centred on the individual motivation and life project development, this statement, which leans towards the former element, has not surprisingly received quite a high rate by the majority of respondents, with an average rate of 3,8 and an almost complete consensus after two rounds.

TRANSVERSAL STATEMENTS

37. Rescue research on education and Lifelong Learning from a marginal position

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
RESCUE RESEARCH ON EDUCATION AND LLL FROM A MARGINAL POSITION	3,8	3-5	2	0

The importance of research is basically acknowledged by the respondents, with none of them sticking to a low rate after the second round. As in many other cases, the IQR suggests that the degree of priority paid to rescue research from a marginal position is however highly differentiated, and covers from medium to very high urgency. This distribution of opinions could furthermore reflect **different perceptions and beliefs on how central and crucial research is as a catalyst for change, with respect to other domains of actions.**

38. Establish more connections among the different areas of Lifelong Learning

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
ESTABLISH MORE CONNECTIONS AMONG THE DIFFERENT AREAS OF LLL	3,4	3-4	3	3 Plus 1 n.a.

As expected, and fully in line with the concept of lifelong/lifewide learning itself, respondents reckon important to focus on establishing bridges among different areas of lifelong learning. With an IQR of 3-4 and an average rate of 3,4, the action is not however among those deserving the highest priority in the experts' perception. **According to one of them, there is no need for a top-down, institutional effort in building the mentioned connections. The process is instead a bottom-up one which is already in place,** since individuals are becoming themselves more aware of these (more or less visible) connections and of the need to rely on them in order to become more flexible and adaptable and exploit all kinds of learning opportunities available and link them one to the other throughout a self-managed development path.

39. Provide more evidence to policy making, but choose indicators that are able to push creativity and innovation, not only conformance

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
PROVIDE MORE EVIDENCE TO POLICY MAKING, BUT CHOOSE INDICATORS THAT ARE ABLE TO PUSH CREATIVITY AND INNOVATION, NOT ONLY CONFORMANCE	3,7	3-4	7	2

Evidence-based policy making is a very up-to-date issue at EU level, especially within the framework of the OMC (open method of coordination) and related policy domains, including education and training. The importance of indicators and the role they themselves can play in shaping policies content and objectives is accounted for in both scientific literature and politics.

The idea of indentifying indicators able to push creativity and innovation, beyond conformance, has raised a certain consensus in the DELPHI survey, as the IQR, average rate and low numbers of deviating opinions show. **In a time of both change and stagnation as the one we are experiencing now, creativity and innovation are deemed to be the key recipes to cope with both challenges, and “shaping the future” and exploiting its potentialities, instead of just suffering it.**

However, according to one of the respondents, **indicators are useless whether proper follow-up policies are not planned, implemented, evaluated and adjusted on their basis.** Such a virtuous circle cannot be taken for granted in present policy making, and an explicit effort should be undertaken also on this side to ensure concrete impact and the desired embedding of creativity and innovation in policy aims.

40. Face openly the issue of relevance of current learning provision: change is urgent

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
FACE OPENLY THE ISSUE OF RELEVANCE OF CURRENT LEARNING PROVISION: CHANGE IS URGENT	3,8	3-5	5	3

The idea that formal education tends to lag behind and not keep the pace with ongoing fast transformations in economy and society goes hand in hand with the belief that it is important to refresh current learning provision in order to fill the gap and fulfil the new needs, enabling people to cope with present social challenges, concerning both labour markets requirements and private life management.

The structural “delay” of formal education is imputed to its difficulty to move ahead from in its original breeding ground, that of *mechanised industrial society scenario*, hereby risking increasing isolation from real life and actual needs.

Within this framework, and thinking of the enormous, though undefined, potential of technology enhanced learning, one of the experts reckons that this action is the *conditio sine qua non* to be ready to profitably exploit the transformative potential of ICT in education.

Looking at numerical results, the majority of opinions covers the whole positive side of the scale (from 3 to 5), hereby highlighting that no agreement exists on how urgent this action is according to different experts’ perception. This also registers **the sensitiveness of the issue of radical reform of formal education as traditionally meant, due to the existence of very opposite beliefs on the desirability of sharp-cut changes** in this domain.

41. Promote both summative and formative assessment that favours innovation, instead of conformance control.

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 5 = more urgent	AVERAGE	IQR	2 round	
			CONV.	DIVERG.
PROMOTE BOTH SUMMATIVE AND FORMATIVE ASSESSMENT THAT FAVOURS INNOVATION, INSTEAD OF CONFORMANCE AND CONTROL	4,1	4-5	8	1

This statement belongs to those submitted in the second DELPHI round and suggested by the respondents in order to avoid undesired evolution in education.

As expressed in other points of this DELPHI survey, focus on the formative purpose of assessment is deemed very important by the majority of respondents. This specific statement addresses the issue of assessment at large (both in its summative and formative dimension), and suggests to introduce mechanisms and tools for evaluation able to encourage innovation, beyond conformance and control.

As for quality assurance and for evidence-based policy making, this statement deals with identifying within existing mechanisms for planning, evaluation and process control, some devices able to embed innovation and creativity within the objectives of education and its policies.

Significantly, in this context, this action stands at what could be defined as a “micro level”, that of assessment of individual learners, while the others are of a more meso (quality assurance) and macro level (policy making process).

With respect to them, and also in absolute terms, this action has received a very high rate, and consensus has concentrated on the top rank of the scale. This suggests hints of reflection on the **high priority paid in general to more micro-level and operative statements, and here specifically on the value of assessment in the learning process (hereby, once again, on learning as a human interaction among the learner and teachers/trainers)**

The results of the DELPHI consultation on the statements is reported in the table below. The 12 statements getting an average of at least 4 in the scale 1 to 6 in terms of urgency are highlighted in bold. Cells marked in grey contain the original Learnovation statements.

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 6 = more urgent	AVERAGE	IQR
Educate teachers to develop for him/herself and for learner creativity, innovation and self-management	4,6	4-5
Utilise ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a toll for developing and accessing knowledge repositories	4,3	4-5
Enhance the innovation capacity of teacher training systems	4,2	4-5
Encourage the business community to adopt learning as a priority in its strategic development and change management approaches	4,2	4-5
Give value to difference in learning process, beyond mere tolerance	4,1	4-5
Strengthen the individual and promote ownership of the learning process, beyond specialist and technical skills	4,1	3-5
Promote both summative and formative assessment that favours innovation, instead of conformance and control	4,1	4-5
Increase focus on learning processes and attitudes in education	4	3-5
Ensure that assessment supports learning	4	3-5
Challenge technology to provide what education needs, rather than letting technology drive educational change	4	3-5
Devolving responsibility and governance to community and stakeholders and share a common vision of learning	4	3-5
Embed learning into organisational change	4	4-5
Re-integrate education into real life	3,9	3-5
Support informal learning and non formal networks creation within each workplace and community	3,9	3-4
Encourage diversity in learning processes	3,8	3-4
universalise distance education and digital content as a learning utility, through public commitment, public/private cooperation and quality assurance development	3,8	3-5

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 6 = more urgent	AVERAGE	IQR
Focus on long-term personal learning goals, rather than on short-term objectives proposed by someone else	3,8	3-4
Rescue research on education and Ill from a marginal position	3,8	3-5
Face openly the issue of relevance of current learning provision: change is urgent	3,8	3-5
Encourage all forms of learning at the workplace	3,7	3-4
Focus also on soft training at the workplace	3,7	3-4
Make sure higher education quality assurance process require innovation	3,7	3-5
Help teachers and trainers to recognise and respect the value of informal learning	3,7	3-5
Provide more evidence to policy making, but choose indicators push creativity and innovation, not only conformance	3,7	3-4
Encourage informal learning beyond the limits of one working organisation	3,6	3-4
celebrate and recognize learning achievements in the workplace	3,5	3-4
Remember diversity and differentiation of learning needs and styles of workers	3,5	3-4
Integrate ict discourse into the broader european higher education discourse (including Ill and the bologna process)	3,5	2-5
Exploit the potential of ict as enabler of quality enhancement, of innovation and of equity in higher education	3,5	3-5
Stimulate the development of relevant, innovative higher education curricula and develop appropriate indicators	3,5	3-4
Bring informal learning into the policy spectrum	3,5	3-4
Make recognition of informal learning outcomes a reality for all	3,5	3-4
Do not forget the contribution of learning in the strategic goals of organisations	3,4	3-4
Use the potential of virtual mobility to democratise access to higher education on an (inter-)national level	3,4	3-4
Campaign for Ill as a flagship initiative for a creative and innovative europe	3,4	3-4
Establish more connections among the different areas of Ill	3,4	3-4
Reduce central control on school	3,3	3-4
Support the integration of informal learning in higher education using social networking technologies while avoiding institutional invasion of student space	3,3	3-4
Address quality issues in informal learning, but respect its specificity	3,3	3-4
Foster public/private and school company partnership	3,1	2-4

Which of the following statements for change require more urgent action? Please rate from 1= less urgent to 6 = more urgent	AVERAGE	IQR
Free networks from any commercialization (advertising and commercial purposes)	3,1	2-4

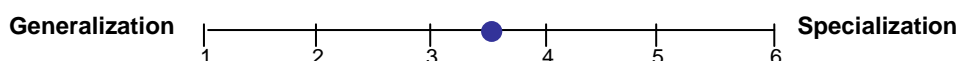
2.6 SHIFT OF BALANCE ALONG POLARITIES

As illustrated in the introductory section of this report, in the third round of the DELPHI consultation, respondents were asked to express their view on the balance of a set of core tensions (polarities) of education identified both by the Learnovation consortium and thanks to the inputs provided by respondents in the previous rounds. In particular, experts were asked to put the balance between the following polarities:

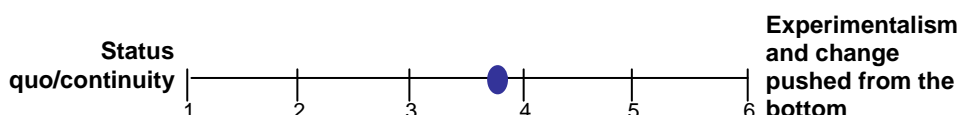
1. **Generalization VS Specialization**
2. **Status quo/continuity VS Experimentalism and change pushed from the bottom**
3. **Supply VS Demand**
4. **Systems adapt to individuals VS individuals adapt to systems**
5. **Adult learning organised around compulsiveness and urgency VS Interest and motivation as main drivers of learning in adulthood**

The rating ranged from 1 to 6, with one implying predominance of the first polarity mentioned and 6 implying predominance of the other one. The results are displayed below:

Generalization VS Specialization (IQR: 3-4; Average: 3,5)



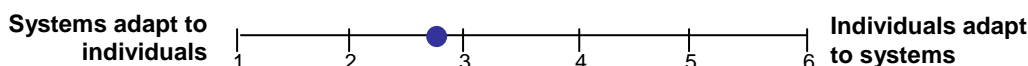
Status quo/continuity VS Experimentalism and change pushed from the bottom (IQR: 3 – 4; Average: 3,8)



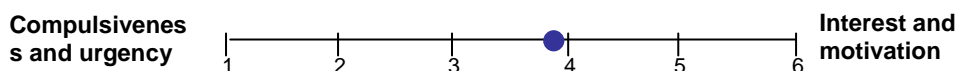
Supply VS Demand (IQR: 2 – 4; Average: 3,2)



Systems adapt to individuals VS individuals adapt to systems (IQR: 2 – 4; Average: 2,83)



Adult learning organised around compulsiveness and urgency VS Interest and motivation as main drivers of learning in adulthood (IQR: 3 – 5; Average 3,91)



The consultation on polarities led - as evidenced from the data displayed above – to an **overall consensus on an increasing focus on individuals and bottom up processes for innovation in learning**: learning systems are expected to increasingly adapt to the needs of individuals; experimentalism and change are expected to be driven from the bottom and to win the traditional resistance to change of education systems; interest and motivation are expected to be the main drivers of learning in adulthood prevailing over compulsiveness and urgency imposing Lifelong Learning from the top .

In addition, the trend of specialisation of curricula is expected to slightly prevail over generalisation of the learning offer. **When it comes to defining the way education is going to be structured in the future, however, there is no clear predominance of one polarity over the other** as the average and IQR stand right in the middle between a system where education is organised (still) by education and training providers (top-down approach) and a system where individuals and groups are the main organisers of their own learning experience (bottom-up approach).

This reflects the main tension the education system is currently experiencing, related to the **challenge to find a good balance between top-down governance and bottom-up collaboration and involvement in designing the education of tomorrow.**

2.7 FORESIGHTS

In the last round of consultation, experts were asked to rate the likelihood of eight forecasts on education in 15 years from now keeping in mind the institutional, socio-economic and technological context. The results are displayed in the table below.

When imagining education 15 years from now, and considering the institutional, socio-economic, technological context, to what extent would you consider these forecasts to be true? Please rate from 1= least likely to 5 = most likely	AVERAGE	IQR
Being a Lifelong learner becomes a natural 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	4,2	3,8 – 5
Most teachers and trainers act as supporters of learning processes, rather than organisers of teaching contents	4,1	4 – 5
Education systems contribute very substantially to social mobility	4	4 – 4,3
School education is no longer centred on contents organised around disciplines and moves its focus to developing the capacity and the motivation to learn	3,9	3 – 5
Learning paths are no longer organised only around centrally defined curricula. A large proportion of what is learnt in formal education is defined locally by stakeholders' dialogue	3,8	3 – 4,3
Social rating (supported by ICT, network relations etc) becomes the dominant assessment and quality assurance approach in many new job profiles, professional communities and knowledge environments, and it has the main influence on recruitment, collaborations and exchange among organisations and among people	3,5	2,8 – 4,3
In formal education, traditional classroom ceases to be the main learning environment, replaced by newly conceived learning spaces	3,4	3 - 4
Every citizen of the world including those in the developing countries have easy access to learning opportunities through ICT in their different forms	3	2 – 4

The consultation on the most feasible forecasts for education in the next 15 years led to results that are in line with the general outcomes of the DELPHI consultation.

Along with the already started trend, technologies are expected to become an emancipating tool for individuals, supporting their process of becoming lifelong learners as a natural condition of life. In such a framework, teachers are expected to support learning processes rather than only to define and organise learning content.

In an expected scenario where specialization of curricula prevails and where individuals have a say and a responsibility in designing and implementing their learning process, education is expected to support social mobility thereby fighting social exclusion. A shift of the education systems to being focused on developing the capacity and motivation to learn (rather than being organised around disciplines) is expected, and an increasing stakeholders' involvement at the local level is foreseen to influence the design of learning paths, meaning a trend towards the Civitas scenario in education and a tendency to localisation rather than internationalisation or universalisation of education.

The issue of quality assessment in such a changing landscape remains a key challenge, as quality systems need to be innovated but respondents do not seem too much in favour of social rating as a tool to assess quality of learning even in the informal and non formal learning field in the next 15 years. Despite the need to innovate learning, experts do not expect traditional classes to disappear in favour of new learning spaces in the next 15 years.

Finally, and, not surprisingly, the lowest value of feasibility is allocated to the forecast related to easy access to education through ICT at worldwide level, including developing countries.

3. CONCLUSIONS

The foresight exercise carried out through the Learnovation DELPHI survey combined with its consultation on more urgent actions for change has produced rich and interesting results, which reflect the complexity and multidimensionality of its object: looking ahead to the future of learning.

On the other hand, against the backdrop of a rising knowledge society, the challenge of lifelong and lifewide learning stands exactly in its ability to breach the separated blocks of learning experiences, favouring a new comprehensive understanding of the learning universe as a whole. This requires in turn to broaden the borders of the research object, as well as to overcome a traditional sectorial perspective to embrace learning as a social phenomenon penetrating societal dynamics and driving development at all levels.

In so doing, the broader Learnovation approach works on a double level: on the one hand it unpacks the learning box, mapping the lifelong learning land into 12 learning territories, but adopting non traditional borders, but innovative ones based on functional criteria. On the other hand, this exercise of disentangling serves the purpose of reconstructing a holistic vision of learning and of its moves ahead to the future without losing focus on the variety of dynamics internally shaping it and producing the inevitable contradictions and tensions which are fuel of the social engine.

Likewise, the DELPHI survey was aimed at investigating experts' opinion on a double level: that of general trends and strategies required in learning at large and more specific foresights concerning each lifelong learning area and related priorities for change. Bridging arising results will permit now to contribute to the Learnovation foresight activity goal of designing future evolution of learning in a societal change perspective, taking into account its multidimensional nature.

The amount of quantitative and qualitative data of the survey is impressive, as much as the issues it aspired to cover. However, reading through the results it is possible to identify some key elements and trends which help painting the features of a potential future learning scenario.

In this conclusive section, major findings of the DELPHI survey will be indeed shaken together so as to make a step ahead towards the understanding of the future.

3.1 EXOGENOUS FACTORS AND ENDOGENOUS ELEMENTS: DIMENSIONS OF CHANGE IN THE LEARNING SCENARIO

3.1.1 Exogenous factors

The feeling that we are crossing an age of change, or better that change is the inner condition of present interconnected society refrains clearly in the survey results. With such a presumption, learning, as much as the other social phenomena, cannot escape from the influence played by surrounding forces affecting world dynamics. These refer to broader economic, social, political, technological, cultural trends.

Impact on “The way people learn” was however a tricky statement, since it asked to evaluate changes produced by very exogenous factors on a more specific dimension than education at large. As a consequence, interesting findings came out from the consultation, suggesting to distrust of superficial impressions.

As illustrated in the report, major differences arise between those factors deemed rather external to the individual learning experience - and concerning a macro analytical dimension - and those more concretely expected to affect people lives and their ways and means of approaching knowledge, information, contents transmission etc., that is learning in diverse life contexts. Nonetheless, a more insightful analysis identifies some relevant, though less visible, trends likely to work under the surface to shape the future of learning in the forthcoming society.

Learning in the technological age - The spread of technology is unanimously expected to push the highest changes in the way people learn, as a trend which is already acknowledged as underway. The “worldwide communication” side of globalisation - intended in its more original meaning of distance compression through ICT and instant data transmission - enables a global scale exchange of knowledge through innovative means, which penetrate the everyday life of individuals, becoming also part of the formal education infrastructure.

Social networks on-line are only one of the manifold examples of ICT-supported learning occasions, but should not hide the deeper change working under the surface. Technologies in post-modernity refer broadly to a paradigm change, which transforms traditional forms of society organisation, affecting all life domains, including education, work, private life and entertainment, hereby offering new learning paradigms reflecting a lifewide learning experience, even out of “virtual” events.

In this perspective, information and communication technologies do not exhaust the whole spectrum of technological bias on learning, though their impact is the greatest one. They are in fact expected to exert an emancipatory power on the individual, thereby contributing to make lifelong learning a natural condition of life and enhancing metacognition of one own learning process.

Globalisation, glocalisation and the world order - Globalisation is a multiple phenomenon. Together with its prime meaning, connected with the information society, it turns out to be a political and economic reality in which opposite forces struggle to prevail, affecting also learning as a social phenomenon and education as a policy provision.

The world order come out of the cold war has raised foresights around the obsolescence of the State and of traditional authorities against a global democratic society ruled by transnational subjects and moving towards increasing convergence on cultural models. However, the frightening face of globalisation and its inner uncertainty have pushed towards an increased attention to the local layer, identified as the stronghold of identity and safety resisting uniformity and standardisation and protecting from global risk exposure. Moreover, worldwide competition has favoured a reorganisation of processes around regions and territories and centrifugal forces pushing towards systems’ decentralisation (both vertical and horizontal). In the middle stands the institutional resistance of state-centered authorities, unwilling to loose traditional power, though increasingly pressed inbetween more direct exchange between the supranational and the local level.

In such a scenario, geopolitical tension in its “real politik” understanding is left in the background. However the distribution of power among countries is supposed to shape globalisation’s features, and reminds that education as a political field of struggle is not neutral to such balance of power. If multiculturalism is indeed expected to produce important changes in the way people learn in all life domains - as a result of communication, migration flows, and diversity management strategies - it is on the other hand suggested to distrust of easy deductions, for dominant learning approaches are not expected to be dismissed by alternative ones coming from peripheral cultures.

Worldwide financial crisis and the future of learning - Even if financial crisis as such is not expected to have a direct impact on the way people learn, the DELPHI results confirm that this exogenous factor is deemed highly likely to affect the education domain. The economic shock is usually adopted by the experts as the filter through which to evaluate future evolutions of policy and attitudes, namely investment in education and training (both from the public and private sector) and value attached to learning as an immaterial asset.

The strive for recovery and the shock produced at all levels of society by the economic downturn are expected to push towards opposite scenarios. In a positive one, the crisis has a path-breaking effect, changing mindsets and political priorities in a long term strategy for sustainable development and new worldwide order. Education become a key to recovery, and a cornerstone of development strategies for a better future. Enhanced attention to adult learners needs, in view of their immediate employability, favours a new adaptation of traditional learning provision to their specific exigencies. In a more worrying scenario, short term recovery recipes dictated by the state of emergency take away money and effort from E&T, redirecting them towards more contingent priorities in other sectors of the economy.

Credibility of the institutions of society - The aforementioned dynamics are expected to happen in the public as well as in the private sector - both concerned with finding ways out of the crisis - and to have a cascade effect on society as a whole, downplaying the role of learning in societal values.

Likewise, crisis of credibility of political institutions and of private subject’s commitment to social responsibility could endanger the civic value of education thanks to a trickle down effect on the social body, for the role of learning in society is dependent upon the commitment showed in first instance by its leading forces.

3.1.2 Endogenous elements

These external factors are indeed expected to affect learning by touching its manifold dimension, economic, political, organisational, cultural, thus more or less directly affecting the way people learn. Looking now right into the learning domain, expected and unlikely features of the 2020 learning scenario help understand how this dimensions are foreseen to be shaped, in light of the external forces pressing from outside and inner drivers of change pushing from inside the learning context.

Living learning in the unfair world: between bottom-up advocacy of “advanced” learning rights and increasing exclusion from basic education

When access is at stake, any optimistic scenario turns out to be rather idealistic, especially in a worldwide perspective. Increasing economic and social inequality across areas of the world is almost unanimously acknowledged as the main obstacle to worldwide implementation of a civitas scenario, where not only basic access to education, but also lifelong learning is a fulfilled individual right.

The impressive disparity between areas of the globe and segments of society pushes towards a polarised scenario.

In the forefront areas individuals and groups are themselves becoming advocates of advanced learning rights and able to autonomously satisfy their learning needs beyond mainstream supply. A gradual process of enhanced importance attached to education as a value and as an individual priority transforms LLL into an interiorized lifestyle, which the individual is increasingly willing and able to master.

On the contrary, in the marginalised peripheries even basic access to education is at risk, hampering any further ambition towards lifelong learning implementation.

Such doubleness risks to be worsened by an ongoing tendency of the centre to align to settled benchmarks, dictated by most powerful stakeholders' interests and labour market needs, hereby lowering focus on the access priority, with the risk of expelling growing number of individuals towards the periphery and increasing polarisation.

In such a scenario, worldwide diffusion of ICT learning utilities - in the framework of standardisation and lowering of prices of infrastructures - is expected to go faster than the required capacity to turn them into fruitful learning opportunities, while the digital and social gap contribute to downplay their development impact in the poorest areas of the world.

Diversification of actors of the learning system(s): bottom-up initiatives and resistance of traditional authorities

Diversification and specialisation of education and training providers is expected to be a prominent features of 2020 education scenario. Increased value of learning as a key asset of the knowledge economy and a milestone of the knowledge democratic society opens room for initiatives in E&T at all levels, attracting actors from diverse worlds.

That of diversification/specialisation is one of the core dimension emerging from the foresight exercise, as a process affecting learning at large and reflecting the increased differentiations of needs and requests on the demand-side, and subsequent response on the supply one, coupled with the natural effects of market mechanisms and increased competition in the market of ideas, pushing for functional specialisation to be more palatable and profitably contribute to the specificities of the context.

Within this process, traditional settlement of learning systems, organised around central state authorities provision and public monopoly on education, is increasingly complemented by initiatives of new subjects belonging to local stakeholders' networks and the private sector. In a context of increasing public budgetary constraints and perceived supply obsolescence, private subjects will intervene both alone as well as in partnership with the public sector.

Innovative, far-seeing institutions are expected to fulfill new societal demands anticipating change, where traditional education is not able to keep the pace. Such a centrifugal push combined with perceived threat of authority loss in light of globalisation and integration forces, produces a certain resistance on the part of traditional education institutions, while forcing them to become more competitive to survive in a learning ecosystem increasingly shaped from bottom-up.

The emergence of worldwide and regional interdisciplinary centers of excellence is expected to be the result of such specialisation/diversification and redefinition of learning systems along new lines and partnerships, substituting the duplication of identical, inefficient all-catching provision delivered on the basis of administrative jurisdiction.

Decentralisation and multiplication of learning solutions: towards localisation and personalisation

New actors shaping learning initiatives and diversification of demands are part of a centrifugal force expected to push for a decentralisation of learning solutions, increasingly organised around local territories in the frame of the “learning regions paradigm” and tailored on the specific needs and features of the individual.

The importance of the “context” as the basis on which to build and tune learning initiatives features prominently in the DELPHI results, especially when confronting data concerning localisation and responsiveness to stakeholder’ needs against overall lower results achieved by convergence scenarios - such as globalisation of educational models and curricula, standardisation of learning provision and accreditation models worldwide, and globalisation of few global learning providers.

However “context” has not only a geographical understanding: it refers also to immaterial communities whose shape is defined according to new patterns of affiliation and individual identities, crossing territorial borders and traditional criteria thanks to ICT.

Open global society and knowledge economy

In such a multidimensional scenario, a simple local-global dicotomy would be a skewed representation. Although differentiation, rather than uniformisation is expected to prevail, a sharp-cut reverse of globalisation trends into closed learning territories and related E&T systems is not among foresights. Modern interconnected society is supposed to run parallel its double currency of knowledge society an information economy at transnational level.

In the age of digital natives, the open knowledge society is expected to push forwards internationalisation, favouring flexibility and innovation at the local level through a continuous flow of exchange with the wider world. In this frame, informal learning through networking will be an outstanding reality in the future, supporting dialogue and diversity in education and widening the borders of traditional educational provision, by crossing local communities and formal learning spaces, while enriching them.

The economic side of globalisation in the framework of the knowledge economy will on the other hand shape also the global market of education supply and knowledge production affected, as other productive sectors, by the logic of global capitalism favouring branding and scaling. In the market of ideas of the knowledge economy, some global learning providers are expected to emerge, especially in aftermath of the economic crisis.

In this double scenario, knowledge capital is liable to undergo opposite processes: increasing privatization in the context of ideas commodification produced by the knowledge economy, as much as universal availability, full and free circulation and shared construction, thanks to ICT diffusion and bottom-up initiatives.

The citizens as centre of their learning experience?

The elements presented so far and the core tensions they highlight match the overall results emerging from the Delphi section on broader foresights for the 2025 and expected shifts of balance along each of the traditional polarities characterizing learning analysis.

That specific piece of consultation revolved around a two-dimensional tension: innovation triggered from bottom-up and decentralised organisation of learning solutions vs. status quo and continuity perpetrated through top-down organisation of education.

At the core of such tension stood the position of the individual in the learning system, as increasingly master of a demand-led lifelong learning experience rather than last ring of a supply-led chain of E&T provision.

Foresights lean towards an increasing focus on individuals and bottom up and decentralised processes for innovation in learning. Despite institutional resistance to change, education systems slowly adapt to a changing scenario in which the emancipatory power of technologies coupled with increased people awareness of the value of education for social mobility press for individual appropriation of the learning experience. This turns into a flexibilization of traditional education, increasingly focused on supporting individual learning processes and developing capacity and motivation to learn rather than on content transmission. Likewise, centrally defined curricula are increasingly dismissed in favour of learning solution locally defined through stakeholders dialogue and increasing diversification.

This change is however expected to be more gradual than one could imagine, and when it comes to defining the way education is going to be structured in 2025, foresights are still unbalanced towards a supply-side dynamics, led by education and training providers rather than steered by individual preferences.

Moreover, the civitas scenario envisaged in most of foresights is constrained by its social/geographical contingency. As illustrated above, although technologies are unanimously attributed an inner emancipatory power on individual learning, strongly contributing to the unfolding of the abovementioned process in the education domain, development gaps between areas of the world impede to universalize expectations.

3.2 MOST LIKELY SCENARIO IN EACH LIFELONG LEARNING AREA

	Mc Learn	Babelogue	Civitas	Monad
Learning in schools				
Learning in VET				
Teachers training				
HE				
Learning at work				
Professional learning networks				
Distance education				
Individual development through e-l				
Communities generating learning as a side effect				

Forecasted evolution of each lifelong learning area helps unpacking the complexity of a future vision of learning, by highlighting the diverse trends expected to drive each learning domain and shaping the lifelong and lifewide learning space within which individuals and actors will move their steps in the future.

The most striking, though coherent, thing emerging from this foresight exercise is that a **monad scenario is potentially associated only to school education** (and attached the same predictability of a civitas evolution). Basic schooling is on the other hand considered the bastion of central authorities provision, on behalf of their role in basic public goods delivering. It is therefore the learning domain more expected to suffer of a structural lower level of openness to internationalisation and flexibility, due also to the inner need of formalisation/structuration of the learning experience as mean of knowledge capital transmission through subsequent generations in society. The firm grasp of state authorities combined with traditional resistance of longstanding institutions is expected to produce its strongest effect on school, as one of the loci of national identity reproduction. However, a civitas scenario is equally expected to be the natural evolution in school as much as in teachers training, unanimously entitled to be the very catalyst of change in the formal education domain.

Therefore, in general all learning areas are expected to move differently and to different degrees towards innovation scenarios. Babelogue and Civitas are in fact all in all the most rated scenarios, whilst an innovation-oriented understanding of mcLearn emerges from the DELPHI survey, dismissing the learning fastfood view in favour of the effectiveness and updating of learning supply and its providers in view of relevant goals of individuals and organisations.

Working and specialising: in the aforementioned understanding, Mc Learn is expected to characterize work as a learning domain and is linked to those learning dimensions implying short term/specific training goals and a certain degree of top-down transmission - namely vocational education and training, learning at work, distance education and individual development through e-learning.

In the formers, what hinders to approach a civitas scenario is the structural difference between working organisation against explicitly learning-oriented domains like those of formal education. Learning at and for work struggles against traditional institutional constraints, including focus on short-term objectives, specialisation, budgetary constraints (especially in the light of the financial crisis), which hamper a fully endorsement of a lifelong learning oriented approach.

Civic loci of education “The Polis”: significantly, learning areas traditionally related to public education provision and part of general education patrimony feeding territories and contributing to social development and cohesion, such as learning in school, teacher training and higher education are expected to move towards a civitas scenario, bridging together the features of formal education with an increased responsiveness to stakeholders needs and localisation of learning solutions, revolving around a political centre maintaining an accountability function, ensuring governance of bottom-up solutions and overall equality across segments of society.

Informal individual learning spaces: when individual learning experiences are at stake, a babelogue scenario is deemed to be the natural evolution of the multiplication of learning occasions/opportunities, virtual as well as F2F, favoured by ICT, globalisation and diversification of providers, among which individual are able to choose in the framework of a fullyfledged learning ecosystem.

Interestingly this babelogue scenario leans towards mclearn when describing an individual relationship between the learner and a provider in an explicit education-oriented experience mediated through ICT, while it shifts to civitas when communities and professional learning networks are at stake, where contingent objectives are usually mixed up with long-term individual goals and personal interests and addressed through a cooperative approach, based on informal exchange.

As a general result, learning is indeed expected to be increasingly embedded into the double reality of the global society, reflected in the two coins of a process of tailorsation/diversification of learning experiences: on the one hand the metaphor of the learning region perfectly represents the evolution expected in the organisation of multiple learning systems from bottom-up, involving E&T providers and local stakeholders in the definition of tailor-made solutions able to contribute to the development of the territory and its innovation, so as to maintain its competitiveness in a global scenario. On the other hand, learning experiences and individual choices are no longer constrained by geographical borders and monopolised paths. Deterritorialization and multiplication of learning occasions permits to reorganise individual interests according to new individual identities, increasingly defined on non traditional borders, and organising a bottom-up demand for innovation.

3.3 KEY MESSAGES EMERGING FROM THE DELPHI SURVEY

DEMOCRATIZING LEARNING TO FOSTER INNOVATION, CREATIVITY AND SOCIAL DEVELOPMENT THROUGH A LIFEWIDE LEARNING APPROACH: UNFOLDING INNOVATION FROM BOTTOM-UP. EVOLUTION OR REVOLUTION?

Against expected evolutions, priorities for change identified through the DELPHI survey do not seem to claim for path-breaking actions, rather to suggest how to steer ongoing changes in order to increase the contribution of learning to societal development, broadly intended in both its social and economic coin, hereby facing/dominating ongoing world dynamics.

In this view, knowledge, learning and human capital are entitled to be milestones for building a desirable future, but require a further embedding at all levels of social activity to fully express their potentialities.

This process is twofold: on the one hand people need to become more and more the centre of individual learning processes. Beyond desire for a new humanism, learner-centred approach and unfolding of people talents deal with strategic management of human capital asset in the knowledge economy and innovation of society, permanently longing for new ideas beyond standardized working force.

On the other hand, a shared vision of learning and of its potentialities across all segments of society, starting from its leading forces, is required to support such a process, so as to trigger a virtuous circle of grass-roots blooming in the framework of a top-down acknowledgment and governance/support. This means to open up to all learning dimensions, notably take to light the informal universe as a fertile breeding ground for bottom-up, decentralised innovation and individual development, enhancing its role within a new socio-economic innovation paradigm.

1. Building learning around the individual from cradle to grave in a veritable learning ecosystem

In this view, it is important to push forwards the evolution of learning systems towards the role of making people masters of their own lifelong learning development path, rather than simply receivers of contents. This is supposed to form individuals able to orientate their choices in view of long-term development goals, rather than of short-term requirements for performance set by contingent life situations, as well as to contribute their individual potentialities in the development of society, thanks to a profitable diversity management in learning.

This finds correspondance and feeds a process of people growing awareness and self advocacy of learning rights and LLL opportunities, turning into a broader diversification of learning supply to fulfill these bottom-up demands as well as in an adaptation to the multiple identities of the "new learners", no longer limited to the traditional flat representation of "the pupil" (young students in school coming from the same culture).

In moving towards this desired direction, the highest priority is paid to the micro level of processes revolving around learning as a human interaction, reflecting faith in the bottom-up germination of change rather than in overambitious systemic actions of reform, entailing some degree of top-down imposition and standardisation.

The strongest priorities is paid to changes pushed at the level of the learning process, notably in rewarding diversity and encourage innovation through a stronger attention on emancipating individual learning autonomy and on mechanisms able to unfold individual potentialities and free the inner creativity force downplayed by reproductive mechanisms for conformance and control.

In this effort, the highest responsibility is attached to teachers and trainers and their own professional development, attitudes and commitment, unanimously reckoned as the starting points of any substantial change of learning systems.

The development of a fully-fledged learning ecosystem, including a public commitment to universalisation of distance education, enhancing universal access and favouring participation in learning opportunities according to individual and context-related conditions, is also deemed a fundamental goal to be pursued in order to create an environment where lifelong learning is enabled to flourish.

2. Recognizing in all learning spaces catalysts for innovation and development

The learning capital held by individuals and groups need to be further acknowledged by the leading forces of society in order to build the aforementioned virtuous circle favouring both lifelong learning implementation and innovation.

This means opening up to all sources of learning, overcoming traditional borders and breaching closed doors, so as to be able to fully catch the energies in society and canalize them within the goals of organisations, letting them introduce and steer change, so as to better keep the pace with the fast transformations happening in an everchanging environment.

“Embed learning into change” is not a workplace’s exclusive priority, as suggested by the statements. It addresses at all levels societal institutions, included education itself in all its form.

Workplaces of the future should recognise learning a strategic role beyond its traditional meaning of workforce training on specialized/contingent skills relevant to the specific productive process. A new strategic approach should intend and exploit learning as a fundamental asset, building on the contribution of the human capital existing within the organisation to trigger organisational change against future challenges and pressures for transformations and competition coming from outside. This includes also to embrace the informal learning capital whose breeding ground is outside the specific organisation, but acts as catalyst of internal innovation and change.

Likewise, education is highly supported to look outside its institutional borders, and be fed by the contribution of parallel informal learning spaces, from where innovative forces are expected to inspire the updating of ideas and curricula, so as to move education ahead from its breeding ground of the industrial society devoted to mechanic reproduction to that of knowledge and ideas, informed to continuous change.

3. Old mechanisms for new goals: moving from reproduction to innovation: new challenges for research

In such an effort to redefine longstanding attitudes towards learning and open up to bottom up innovation, traditional mechanisms are endowed to convey new instances for innovation through learning, by embedding them into individual lifestyles, organisational procedures and policy objectives, so as to mainstream innovation in society. This opens room for an effort on the part of educational research to contribute substantially to the definition of these mechanisms.

Tuning strategies for Technologies and ICTs exploitation: capacity building. In a world in which technological change is expected to produce the most important changes on the way people learn, a priority challenge is to control and steer its impact, to avoid technology overwhelming our lives. Building capacity to tune strategies and approaches to TEL and ICT-led innovation is the milestone of such a challenge, and should push forwards the passage from a first generation “hardware” approach, to a second generation’s understanding of ICT as a means to support tailored processes of flexibilization, cooperative knowledge construction, communities creation and exchange, virtual mobility, blended learning environment creation and innovative distance education, able to fulfill the double goal of increasing access and exploitation of learning opportunities and of fostering innovation.

Mainstreaming innovation in procedures - Creativity and innovation should leave the status of “positive externalities” of repetitive processes and procedures and be mainstreamed in reliable and objective mechanisms able to promote them, on behalf of the belief that what is hidden by indicators and evaluation instruments is at risk of disappearing in favour of conformance and “race to the benchmark”, while innovation is fundamental in an age of *both change and stagnation*. Required mechanisms include:

- ◆ *Assessment strategies supporting creativity* beyond conformance and control, and learning strategies able to give value to difference, beyond mere tolerance.
- ◆ *A New Quality assurance approach* embedding requirements for innovation, as a mechanism necessary to preserve reliability within an enlarging learning system whose borders become harder to catch as well as to ensure a certain room for creativity. However a rediscussion of our shared understanding of quality assurance itself is required to extend its application to the informal domain, where it is perceived as increasingly urgent but difficult to deploy its traditional instruments as well as to shift to too informal ones, such as simple social rating.
- ◆ *New virtuous policy cycle* employing relevant indicators from planning to evaluation able to measure innovation and push it forwards through tuned strategies.

4. Favours decentralisation and bottom up definition of learning solutions

The expected reorganisation of learning solutions according to instances of decentralisation and localisation is supported as a positive one, able to provide more tailor-made solutions coming from grass-roots needs and able to express excellence, against centrally imposed priorities and related standardised provision failing to unfold local potentialities for innovation.

The latter is in fact expected to find a breeding ground only in grass-root initiatives and small size experimentations, while the local layer managed by stakeholders networks and groups is deemed the most suitable to express the specific exigencies of a territory and fulfill them through innovative solutions. This does not imply dismissing the role of the centre, neither letting private market forces overwhelm learning autonomy, rather ensuring the most efficient allocation of resources while maintaining the accountability role of political centres of authority as guardian of equity and equality and governance of any social process liable to affect the public good.

Alltogether this pushes towards a democratization/decentralization of the learning panorama, along two dimensions of a civitas scenario, that of individual development and innovation, feeding into one another, but producing themselves their own contradictions and clashes with existing obstacles.

The former insist on increasing individual contribution in society and its changes by means of its participation in a fully accessible learning ecosystem, in a lifelong learning perspective, offering also second chance opportunities to develop one own potentialities, by exploiting a learning deinstitutionalised supply which has a lifelong and lifewide character (as it is available in work, private life, ICT, through informal learning and virtual mobility). In this perspective, valorisation of differences, focus on learning processes, self management and individual attitude to innovation and creativity rather than conformance, combined with recognition of informal learning and experience enable individual and groups to contribute their role to society in all life domains, including working organisations.

This process cannot however be imagined at worldwide level, since broadening social and economic divide hampers even basic access to education and it is not expected to be reversed in the short time, rather to increase, making separation between areas of the world and related learning scenarios sharper than it is now. In this framework, actions devoted to promote access, by means of virtual mobility and universalisation of distance education make a step ahead towards equal opportunities, by holding on the potentialities of ICT to erase geographic distance and to supply learning occasions to everybody, but are not sufficient to change the actual distribution of learning resources in the worlds and across segments of society.

Moreover such a democratization which is a key to innovation combined with the open up of the system to inputs coming from outside its formal borders could be expected to clash with resistance of traditional system of power to the explosive potential of increasing slices of democracy and diversity pressing from within organisations.

Favouring innovation through learning and ICT as suggested by more rated actions for change has indeed a double currency: it is the endowed to favour growth and competitiveness raising overall level of development of society, thanks to new strategies adopted by its leading institutions able to embed centrifugal forces, as well as to start working under the surface to put in discussion the existing order.

ANNEX

Delphi Questionnaires



DELPHI SURVEY – ROUND 1 QUESTIONNAIRE

1.

Which of the following factors will produce the most important changes in the way people learn? (please rate from 1-little impact to 5- very significant impact)

	1	2	3	4	5
Globalisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geopolitical tensions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial crisis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technological progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiculturalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increasing unemployment rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crisis of legitimacy of political institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporate and financial services social responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social networking on line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decrease of public funding for education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.

Which of the following elements of scenarios do you judge most likely in the year 2020? (Please rate from 1= least likely to 5= most likely)

	1	2	3	4	5
Consolidation of few global learning providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Globalisation of educational models and curricula	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Standardised learning solutions and accreditation models worldwide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to learning for all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased responsiveness of education to stakeholders' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning initiatives by E&T institutions more and more linked to the needs of the local context (region, cities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifelong learning becomes a fundamental right and duty for all citizens of the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rejection of internationalisation and decreased flexibility and attitude to innovate by learning systems as a consequence of geopolitical tensions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to technology enhanced learning for all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Informal learning through networking emerging as the XXI century learning model, allowing for diversity and dialogue in education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergence of worldwide and regional interdisciplinary centres of excellence | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Increased investment in E&T by public funding | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Increased investment in E&T by private sponsors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Increased role of public-private partnerships in E&T | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. Are there any other elements not included in the above list that you would like to add?

After reading carefully the description of the 4 Learnovation Scenarios, please state:

Towards which scenario will each of the following lifelong learning areas evolve spontaneously if no new policy is activated (1=less likely scenario; 3 = most likely scenario)

4. Learning in schools:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Learning in Vocational Education and Training:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Babelogue

6. Training of teachers and trainers:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Learning at the workplace:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Professional learning networks:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Higher Education:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Distance education:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Individual development through e-learning:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Communities generating learning as a side effect:

	1	2	3
Mc Learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civitas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Monad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babelogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

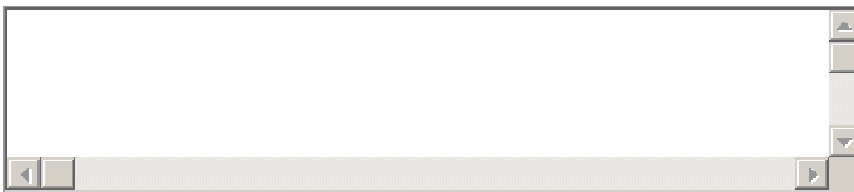
What you think could be done to avoid undesired evolution, in each lifelong learning area for which you feel ready to express a view --- Actions suggested to avoid undesired evolution:

13. ICT for learning in schools

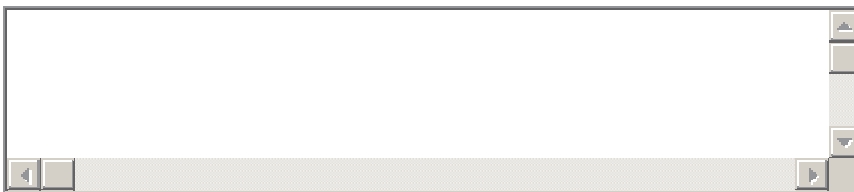
14. ICT for learning in Vocational Education and Training



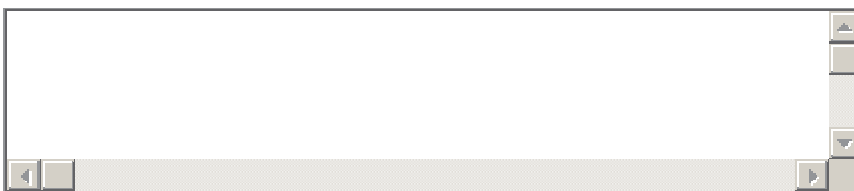
15. Training of teachers and trainers



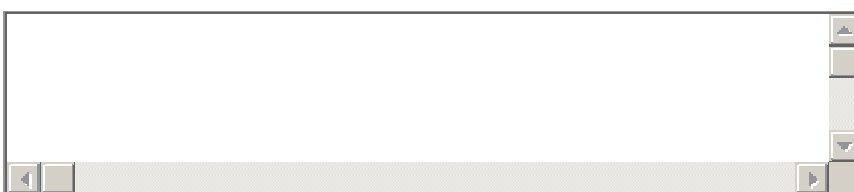
16. Learning at the workplace



17. Professional learning networks



18. Higher Education



19. Distance education

20. Individual development through e-learning

21. Communities generating learning as a side effect

22. After reading carefully the 26 Learnovation statements for change reported below, please state which of them require more urgent action. Please rate from 1=less urgent to 5=more urgent.

	1	2	3	4	5
1. Increase focus on learning processes and attitudes in education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Re-integrate education into real life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Encourage diversity in learning processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Ensure that assessment supports learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Enhance the innovation capacity of teacher training systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Encourage all forms of learning in the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Embed learning into organisational change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Celebrate and recognise learning achievements in the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 9. Remember diversity and differentiation of learning needs and styles of workers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Encourage informal learning beyond the limits of one working organisation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Do not forget the contribution of learning to the strategic goals of organisations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Integrate ICT discourse into the broader European Higher Education discourse (including Lifelong Learning and the Bologna process) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Make sure Higher Education quality assurance processes require innovation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Exploit the potential of ICT as enabler of quality enhancement, of innovation and of equity in Higher Education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Use the potential of virtual mobility to democratise access to Higher Education on an (inter-)national level | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Support the integration of informal learning in Higher Education using social networking technologies while avoiding institutional invasion of student space | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Stimulate the development of relevant, innovative Higher Education curricula and develop appropriate indicators | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Bring informal learning into the policy spectrum | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Address quality issues in informal learning, but respect its specificity | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Make recognition of informal learning outcomes a reality for all | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Help teachers and trainers to recognise and respect the value of informal learning | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Campaign for Lifelong learning as the flagship initiative for a creative and innovative Europe | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Rescue research on education and Lifelong Learning from a marginal position | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Establish more connections among the different areas of Lifelong Learning | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Provide more evidence to policy making, but choose indicators that are able to push creativity and innovation, not only conformance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Face openly the issue of relevance of current learning provision: change is urgent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

23. Please suggest other relevant actions not included in the above list:

24. Name:

	<input type="text"/>
--	----------------------

25.	Email:
	<input type="text"/>

26.	Institution:
	<input type="text"/>

27.	Position:
	<input type="text"/>

28.	Country:
	<input type="text"/>

[Submit Survey](#)



DELPHI SURVEY QUESTIONNAIRE – 2nd Round

Dear expert,

In the framework of the LEARNOVATION Delphi survey, we are now at inviting you to take part in the second round and we are pleased to provide you with the instruments to proceed.

The document you are receiving has a twofold nature: **it provides you with an overview on results of the first round** and in the meanwhile **it serves as your second questionnaire to fill in**.

In order to achieve this double result, we have opted for a highly synthetic visualisation of the results of each question - as derived from the elaboration of data - to which you will be able to compare your response.

A total number of 44 European Education and Training experts took part in the first round, and new interesting inputs have arisen and feed now this second round.

In order to ensure “easy reading”, we have maintained the questions as numbered in the questionnaire you filled. As you may remember, the questionnaire was articulated in three main sections, i.e.:

- ◆ General actors and elements of the scenarios likely to affect Education and learning in the future
- ◆ Likely future scenarios in each territory, and suggestions to avoid undesired evolution
- ◆ Learnovation statements on urgent actions for change

Specifically, results will be summarised by two main data, i.e.: average (AV) and Inter Quartile Range (IQR) showing, for each question, the range in which the majority of responses have concentrated. Next to these data you will find your answer, which will be underlined in colour when diverging from the general opinion.

You will have then the chance either to stick to your divergent opinion or to reconsider your answer and align your position with the one expressed by the majority of participants. In this first case, you will be asked to provide reason for your divergence. DELPHI, as you know, foresees either a convergence of replies or a “motivated” divergence/polarization.

Furthermore, some new questions have been added in this second round on the basis of the suggestions come out of previous questionnaire. You will be asked to read them carefully and provide a new rating on these.

This process will pave the way for the third DELPHI round, to which all participants have agreed to take part so as to guarantee quality and reliability of results.

In order to go ahead with the DELPHI rounds and being consistent with its methodology, so as to achieve sound final results, we ask you indeed to read carefully this new questionnaire and provide your answer where requested. In the case you need a refreshment on the future scenarios, necessary to answer the questions, you can refer to the letter of invitation to the survey we have attached to the mail.

Once you have filled the form, you are kindly asked to send it back to the email address cdondi@scienter.org, within the 2nd of September.

This will give us time to elaborate new data and launch the third round by the 10th of September.

We would like to take the occasion to thank you for the contribution you have provided so far, and for your future cooperation in this survey.

Should you need any further information, please do not hesitate to contact us at the following email address scienter@scienter.org

Kindest Regards,

The Learnovation Consortium¹

¹ MENON Network EEIG (BE); SCIENTER (IT) ; PAU Education (ES); the European Distance and E-learning Network – EDEN (UK); Catholic University of Portugal (PT)

1. Which of the following factors will produce the most important changes in the way people learn? (please rate from 1-little impact to 5- very significant impact)

1.1

Globalisation		
Average	Inter Quartile Range (IQR)	Your Answer
3,7	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.2

Geopolitical tensions		
Average	Inter Quartile Range (IQR)	Your Answer
2,7	2-3	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.3

Financial crisis		
Average	Inter Quartile Range (IQR)	Your Answer
3,0	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.4 **Technological progress**

Average	Inter Quartile Range (IQR)	Your Answer
4,2	4-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.5 **Multiculturalism**

Average	Inter Quartile Range (IQR)	Your Answer
3,3	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.6 **Increasing unemployment rate**

Average	Inter Quartile Range (IQR)	Your Answer
3,2	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.7 **Crisis of legitimacy of political institutions**

Average	Inter Quartile Range (IQR)	Your Answer
2,3	2-3	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.8 **Corporate and financial services social responsibility**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
2,6	2-3	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.9 **Social networking on line**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,8	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

1.10 **Decrease of public funding for education**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,8	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

**2. Which of the following elements of scenarios do you judge most likely in the year 2020?
(Please rate from 1= least likely to 5= most likely)**

2.1 **Consolidation of few global learning providers**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
2,7	2-3	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.2 **Globalisation of educational models and curricula**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
2,9	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.3 **Standardised learning solutions and accreditation models worldwide**

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
2,8	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.4 **Access to learning for all**

Average	Inter Quartile Range (IQR)	Your Answer
3,0	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.5 **Increased responsiveness of education to stakeholders' needs**

Average	Inter Quartile Range (IQR)	Your Answer
3,4	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.6 **Learning initiatives by E&T institutions more and more linked to the needs of the local context (region, cities)**

Average	Inter Quartile Range (IQR)	Your Answer
3,6	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.7 **Lifelong learning becomes a fundamental right and duty for all citizens of the world**

Average	Inter Quartile Range (IQR)	Your Answer
3,0	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.8 Rejection of internationalisation and decreased flexibility and attitude to innovate by learning systems as a consequence of geopolitical tensions

Average	Inter Quartile Range (IQR)	Your Answer
2,3	2-3	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.9 Access to technology enhanced learning for all

Average	Inter Quartile Range (IQR)	Your Answer
3,4	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.10 Informal learning through networking emerging as the XXI century learning model, allowing for diversity and dialogue in education

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.11 Emergence of worldwide and regional interdisciplinary centres of excellence

Average	Inter Quartile Range (IQR)	Your Answer
3,7	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.12 Increased investment in E&T by public funding

Average	Inter Quartile Range (IQR)	Your Answer
3,0	2-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.13 Increased investment in E&T by private sponsors funding

Average	Inter Quartile Range (IQR)	Your Answer
3,2	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

2.14 Increased role of public-private partnerships in E&T

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-4	

Do you want to converge? Yes No

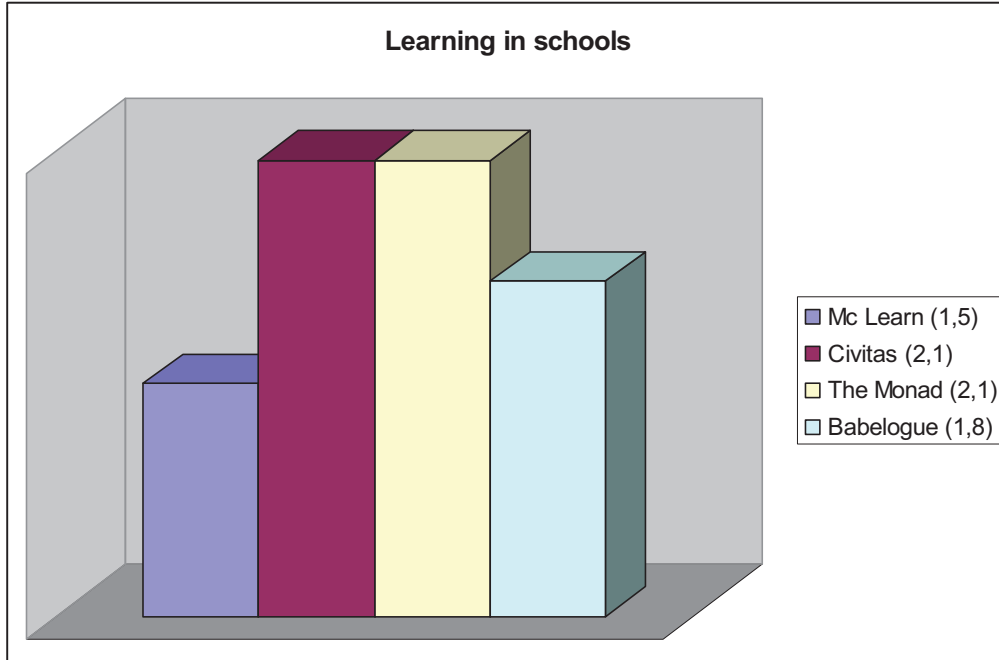
Reason for your choice (if you continue to diverge)

**3. New elements of future scenarios likely to appear in 2020 as suggested by DELPHI participants in the 1st Round
(Please rate from 1= least likely to 5= most likely)**

		1	2	3	4	5
3.1	Increased value attributed to learning and education and penetration and mainstreaming of Lifelong Learning as a fully interiorised perspective on life and society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Specialisation/Diversification of education and training providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3	Trend towards increased privatisation of knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4	Emergence of innovative institutions as grassroots leaders of change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Towards which scenario will each of the following lifelong learning areas evolve spontaneously if no new policy is activated (1=less likely scenario; 3 = most likely scenario)

4. Learning in schools:



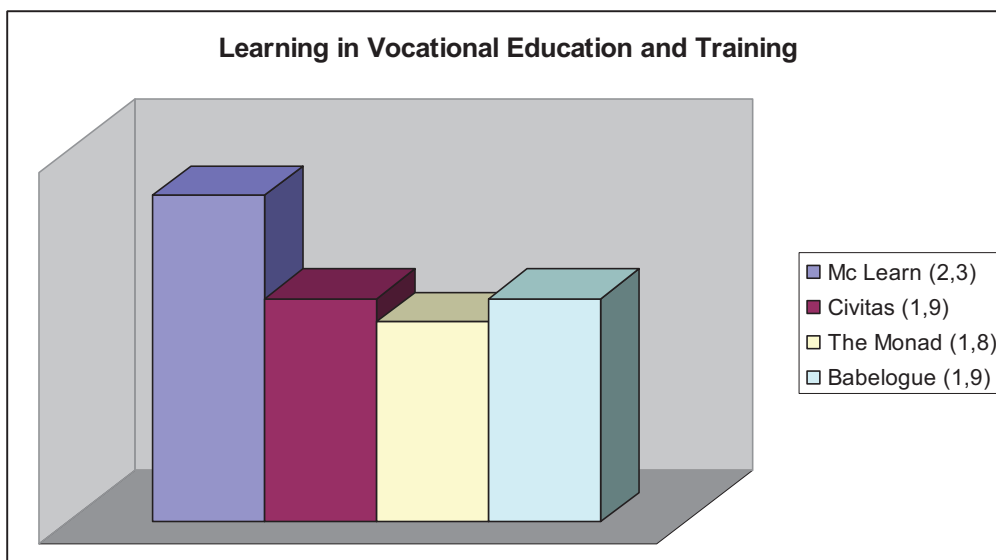
According to respondents, the most likely scenarios in Learning in schools result to be Civitas and The Monad.
Do you agree?

Yes

No

If no, please explain why

5. Learning in Vocational Education and Training:

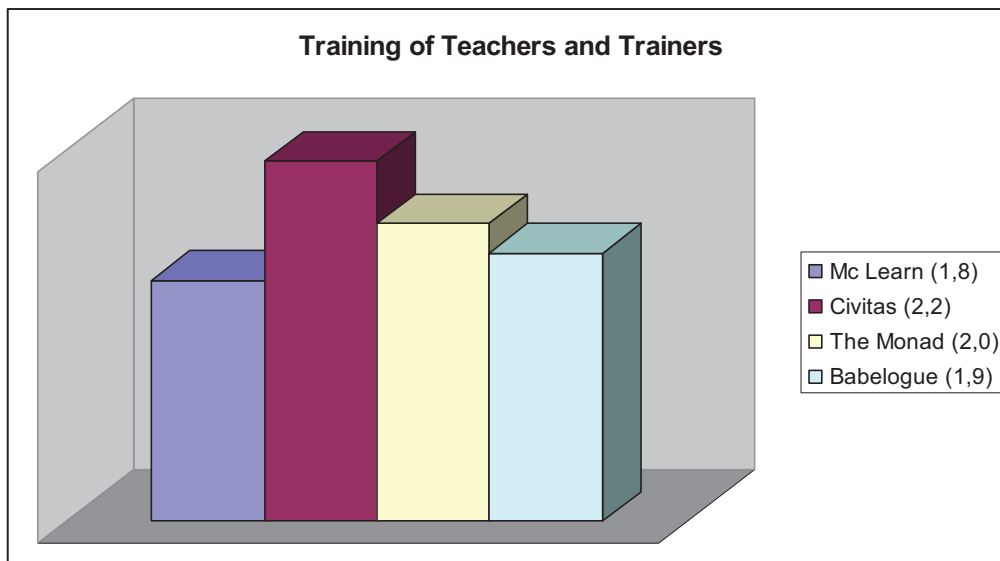


According to respondents, the most likely scenario in Learning in Vocational Education and Training results to be Mc Learn. Do you agree?

Yes No

If no, please explain why

6. Training of teachers and trainers:

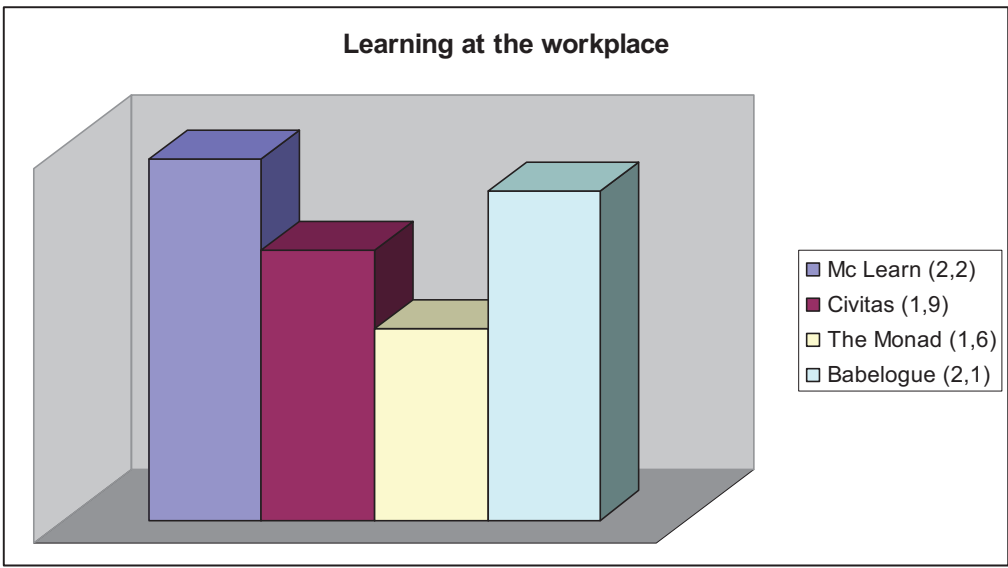


According to respondents, the most likely scenario in Training of teachers and trainers results to be Civitas.
Do you agree?

- Yes No

If no, please explain why

7. Learning at the workplace:

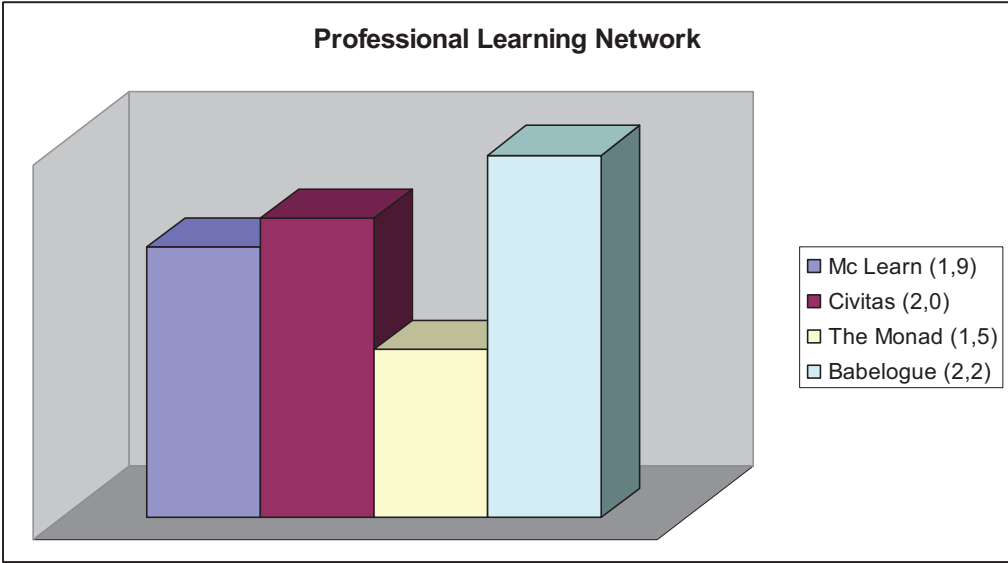


According to respondents, the most likely scenarios in Learning at the workplace result to be Mc Learn and Babelogue. Do you agree?

- Yes
- No

If no, please explain why

8. Professional learning networks:

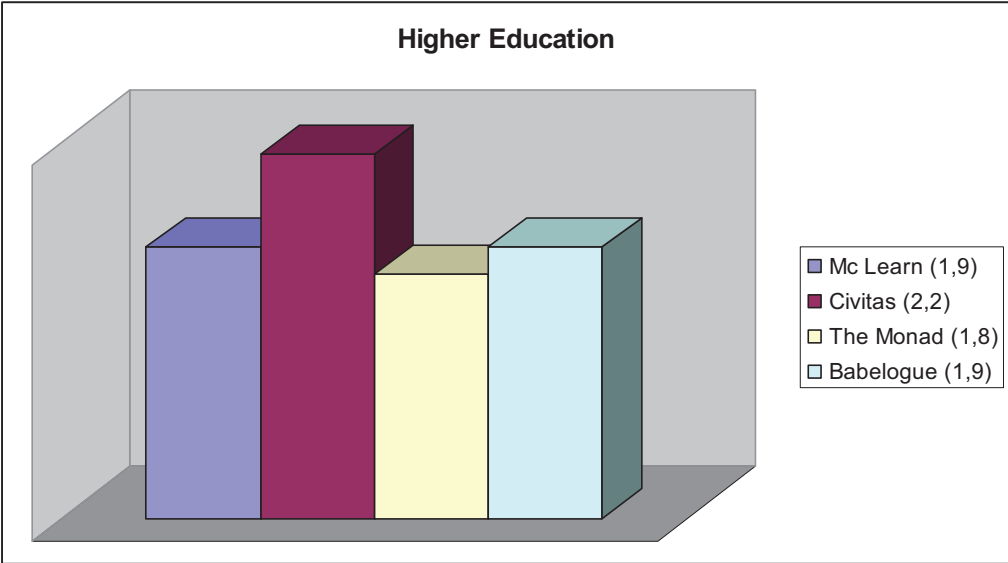


According to respondents, the most likely scenario in Professional learning networks results to be Babelogue. Do you agree?

- Yes
- No

If no, please explain why

9. Higher Education:

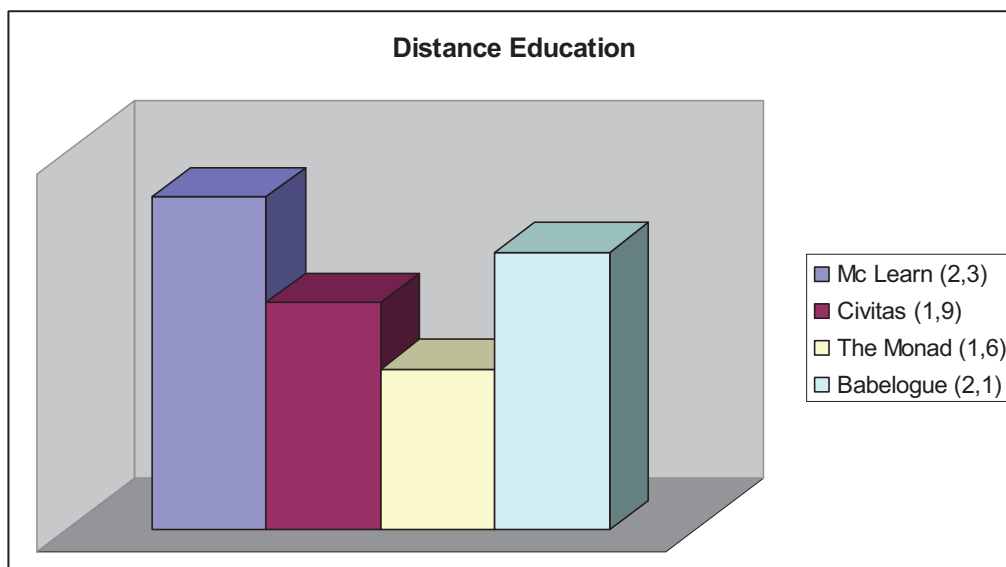


According to respondents, the most likely scenarios in Higher Education results to be Civitas.
Do you agree?

- Yes No

If no, please explain why

10. Distance education:

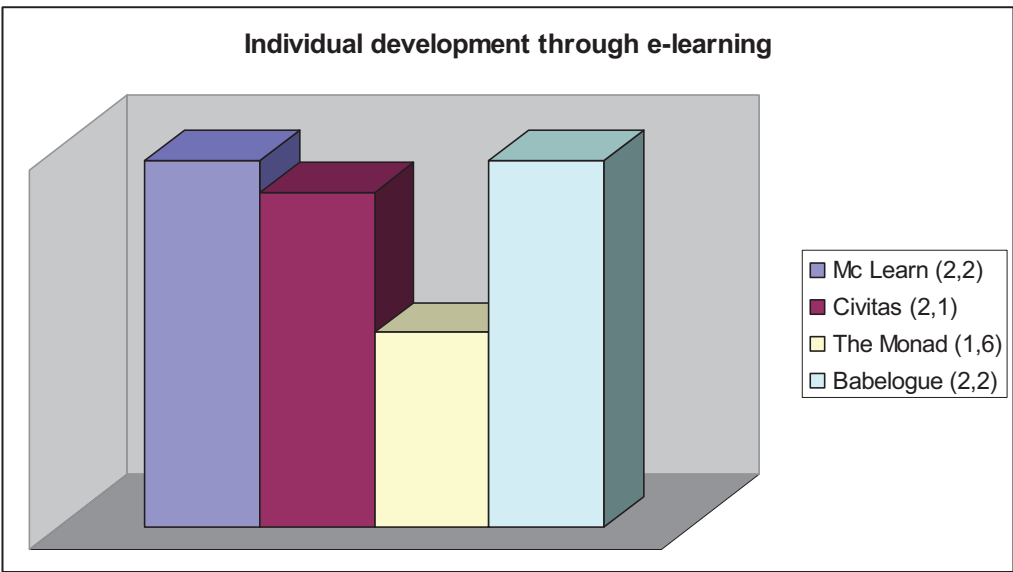


According to respondents, the most likely scenarios in Distance education results to be Mc Learn followed by Babelogue. Do you agree?

- Yes No

If no, please explain why

11. Individual development through e-learning:

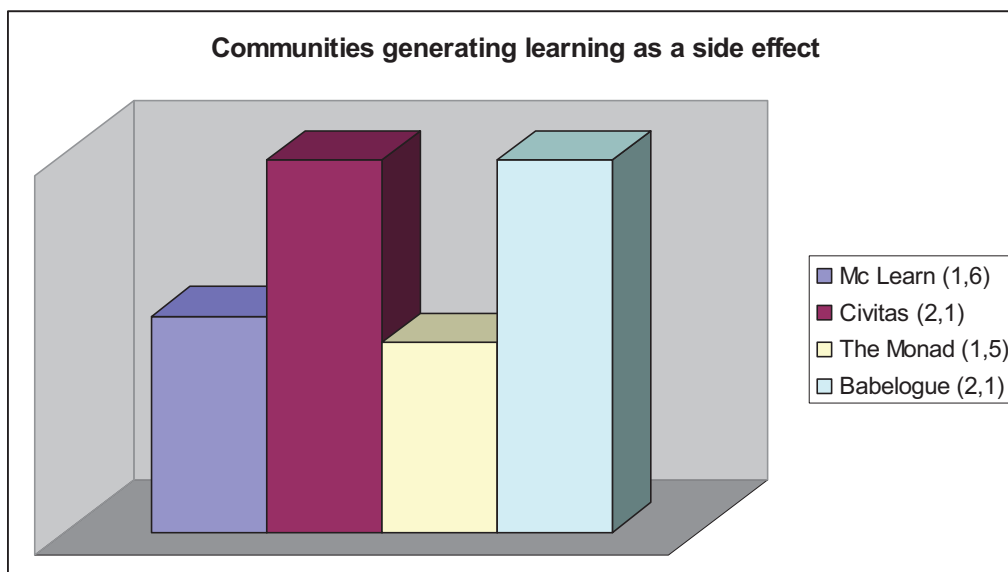


According to respondents, the most likely scenarios in Individual development through e-learning result to be Mc Learn and Babelogue followed by Civitas. Do you agree?

Yes No

If no, please explain why

12. Communities generating learning as a side effect:



According to respondents, the most likely scenarios in Communities generating learning as a side effect result to be Civitas and Babelogue. Do you agree?

Yes

No

If no, please explain why

22. More urgent actions for change. Please rate from 1=less urgent to 5=more urgent. The suggestions of the respondents on how to avoid undesired effects of scenarios have been grouped and included in the following list of statements as new ones.

22.1 Increase focus on learning processes and attitudes in education		
Average	Inter Quartile Range (IQR)	Your Answer
4,0	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.2 Re-integrate education into real life		
Average	Inter Quartile Range (IQR)	Your Answer
3,9	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.3 Encourage diversity in learning processes		
Average	Inter Quartile Range (IQR)	Your Answer
3,8	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.4	Ensure that assessment supports leaning		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	4,0	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.5	Enhance the innovation capacity of teacher training systems		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	4,2	4-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

Please rate from 1=less urgent to 5=more urgent

	1	2	3	4	5
Challenge technology to provide what education needs, rather than letting technology drive educational change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduce central control on school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Give value to difference in learning process, beyond mere tolerance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Devolving responsibility and governance to community and stakeholders and share a common vision of Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foster public/private and school/company partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthen the individual and promote ownership of the learning process, beyond specialist and technical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Educate teachers to develop for him/herself and for the learner creativity, innovation and self-management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22.6	Encourage all forms of learning in the workplace		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,7	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.7	Embed learning into organisational change		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	4,0	4-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.8	Celebrate and recognise learning achievements in the workplace		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.9	Remember diversity and differentiation of learning needs and styles of workers		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.10	Encourage informal learning beyond the limits of one working organisation		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,6	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.11	Do not forget the contribution of learning in the strategic goals of organisations		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,4	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

Please rate from 1=less urgent to 5=more urgent	1	2	3	4	5
Focus also on soft training at the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage the business community to adopt learning as a priority in its strategic development and change management approaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free networks from any commercialization (advertising and commercial purposes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support informal and non formal networks creation within each workplace and community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support informal and non formal networks creation within each workplace and community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22.12	Integrate ICT discourse into the broader European Higher Education discourse (including Lifelong Learning and the Bologna process)		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,5	2-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.13 **Make sure Higher Education quality assurance process require innovation**

Average	Inter Quartile Range (IQR)	Your Answer
3,7	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.14 **Exploit the potential of ICT as enabler of quality enhancement, of innovation and of equity in Higher Education**

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.15 **Use the potential of virtual mobility to democratise access to Higher Education on an (inter-)national level**

Average	Inter Quartile Range (IQR)	Your Answer
3,3	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.16 **Support the integration of informal learning in Higher Education using social networking technologies while avoiding institutional invasion of student space**

Average	Inter Quartile Range (IQR)	Your Answer
3,3	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.17 Stimulate the development of relevant, innovative Higher Education curricula and develop appropriate indicators

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

Please rate from 1=less urgent to 5=more urgent

	1	2	3	4	5
Universalise distance education and digital content as a learning utility, through public commitment, public/private cooperation and quality assurance development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilise ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a tool for developing and accessing knowledge repositories.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22.18 Bring informal learning into the policy spectrum

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.19 Address quality issues in informal learning, but respect its specificity

Average	Inter Quartile Range (IQR)	Your Answer
3,3	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.20	Make recognition of informal learning outcomes a reality for all		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,5	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.21	Help teachers and trainers to recognise and respect the value of informal learning		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,7	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.22	Campaign for Lifelong Learning as a flagship initiative for a creative and innovative Europe		
	<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
	3,4	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

Please rate from 1=less urgent to 5=more urgent

	1	2	3	4	5
Focus on long-term personal learning goals, rather than on short-term objectives proposed by someone else	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22.23 **Rescue research on education and Lifelong Learning from a marginal position**

Average	Inter Quartile Range (IQR)	Your Answer
3,8	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.24 **Establish more connections among the different areas of Lifelong Learning**

Average	Inter Quartile Range (IQR)	Your Answer
3,4	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.25 **Provide more evidence to policy making, but choose indicators that are able to push creativity and innovation, not only conformance**

Average	Inter Quartile Range (IQR)	Your Answer
3,7	3-4	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

22.26 **Face openly the issue of relevance of current learning provision: change is urgent**

Average	Inter Quartile Range (IQR)	Your Answer
3,8	3-5	

Do you want to converge? Yes No

Reason for your choice (if you continue to diverge)

Please rate from 1=less urgent to 5=more urgent

	1	2	3	4	5
Promote both summative and formative assessment that favours innovation, instead of conformance control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



DELPHI SURVEY QUESTIONNAIRE – 3rd Round

Dear expert,

In thanking you again for the continuity of your participation in this DELPHI, we are now pleased to submit you the final questionnaire of the survey.

It will serve both to check consensus on the latest questions we introduced and, above all, to investigate with a final round more general positions on major trends emerged from the survey around the future of learning as a whole.

Reading through the results of the previous rounds, also some issues remained uncovered have emerged and this is the occasion to propose them, and close the survey with a quite complete view.

Therefore, this questionnaire is organised as follows:

- ◆ **Section 1** is organised as in the previous round. It presents a highly synthetic visualisation of the results of the questions introduced in the 2nd Round questionnaire - as derived from the elaboration of data - to which you will be able to compare your response.
Specifically, results will be summarised by two main data, i.e.: average (AV) and Inter Quartile Range (IQR) showing, for each question, the range in which the majority of responses have concentrated. Next to these data you will find your answer, which will be underlined in colour when diverging from the general opinion.
You will have then the chance either to stick to your divergent opinion or to reconsider your answer and align your position with the one expressed by the majority of participants. In this first case, you will be asked to provide reason for your divergence. DELPHI, as you know, foresees either a convergence of replies or a “motivated” divergence/polarization.
- ◆ **Section 2** proposes some new questions on future scenarios in learning, addressing issues left uncovered by the survey and raised by the respondents through their comments. As usual, you will be asked to give a rating on a series of statements.
- ◆ **Section 3** proposes a series of core tensions emerging as far as critical uncertainties for future learning are concerned. In this section you will be asked for each tension to position on a continuum among the two extreme poles, by giving a rating of 1 to 6.

Once you have filled the form, you are kindly asked to send it back to the email address cdondi@scienter.org, within the 2nd of October 2009.

The results of this questionnaire will be merged with those arisen from previous rounds and a final report on the DELPHI survey will be elaborated within two months time and we will be pleased to submit it to you, once finalised.

We would like to take the occasion to thank you for the contribution and cooperation you have provided in this survey.

Should you need any further information, please do not hesitate to contact us at the following email address scienter@scienter.org

Kindest Regards,

The Learnovation Consortium¹

¹ MENON Network EEIG (BE); Scienter (IT) ; PAU Education (ES); the European Distance and E-learning Network – EDEN (UK); Catholic University of Portugal (PT)

SECTION 1

New elements of future scenarios likely to appear in 2020 as suggested by DELPHI participants in the 1st Round

(Please rate from 1= least likely to 5= most likely)

Increased value attributed to learning and education and penetration and mainstreaming of Lifelong Learning as a fully interiorised perspective on life and society

Average	Inter Quartile Range (IQR)	Your Answer
3,5	3-4	

Specialisation/Diversification of education and training providers

Average	Inter Quartile Range (IQR)	Your Answer
3,8	3-4	

Do you want to converge?

Yes

No

Reason for your choice (if you continue to diverge)

Trend towards increased privatisation of knowledge

Average	Inter Quartile Range (IQR)	Your Answer
3,1	2-4	

Do you want to converge?

Yes

No

Reason for your choice (if you continue to diverge)

Emergence of innovative institutions as grassroots leaders of change

Average	Inter Quartile Range (IQR)	Your Answer
3,6	3-4	

Do you want to converge?

Yes

No

Reason for your choice (if you continue to diverge)

More urgent actions for change. Please rate from 1=less urgent to 5=more urgent.
 The suggestions of the respondents on how to avoid undesired effects of scenarios have been grouped and included in the following list of statements as new ones. sono f

Challenge technology to provide what education needs, rather than letting technology drive educational change

Average	Inter Quartile Range (IQR)	Your Answer
4	3-5	

Reduce central control on school

Average	Inter Quartile Range (IQR)	Your Answer
3,3	3-4	

Give value to difference in learning process, beyond mere tolerance

Average	Inter Quartile Range (IQR)	Your Answer
4,1	4-5	

Developing responsibility and governance to community and stakeholders and share a common vision of Learning

Average	Inter Quartile Range (IQR)	Your Answer
4	3-5	

Foster public/private and school/company partnerships

Average	Inter Quartile Range (IQR)	Your Answer
3,1	2-4	

Strengthen the individual and promote ownership of the learning process, beyond specialist and technical skills

Average	Inter Quartile Range (IQR)	Your Answer
4,1	3-5	

Educate teachers to develop for him/herself and for the learner creativity, innovation and self-management

Average	Inter Quartile Range (IQR)	Your Answer
4,6	4-5	

Focus also on soft training at the workplace

Average	Inter Quartile Range (IQR)	Your Answer
3,7	3-4	

Do you want to converge?

 Yes

 No

Reason for your choice (if you continue to diverge)

Encourage the business community to adopt learning as a priority in its strategic development and change management approaches

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
4,2	4-5	

Free networks from any commercialization (advertising and commercial purposes)

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,1	2-4	

Support informal and non formal networks creation within each workplace and community

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,9	3-4	

Universalise distance education and digital content as a learning utility, through public commitment, public/private cooperation and quality assurance development

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,8	3-5	

Utilise ICT as a support for collaborative exchange and cooperative construction of knowledge, rather than as a tool for developing and accessing knowledge repositories.

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
4,3	4-5	

Focus on long-term personal learning goals, rather than on short-term objectives proposed by someone else

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
3,8	3-4	

Do you want to converge?

Yes

No

Reason for your choice (if you continue to diverge)

Promote both summative and formative assessment that favours innovation, instead of conformance control.

<i>Average</i>	<i>Inter Quartile Range (IQR)</i>	<i>Your Answer</i>
4,1	4-5	

SECTION 2

After examining the results of the second round, a general convergence on the majority of the issues proposed emerges, providing an interesting picture on possible trends of the future of learning and more urgent actions for change. However a few relevant themes raised by those diverging from the majority of opinions in their comments, still remain uncovered. These new inputs are indeed addressed in this final round, in order to finalize the survey.

WHEN IMAGINING EDUCATION 15 YEARS FROM NOW, AND CONSIDERING THE INSTITUTIONAL, SOCIO-ECONOMIC, TECHNOLOGICAL CONTEXT, TO WHAT EXTENT WOULD YOU CONSIDER THESE FORECASTS TO BE TRUE? PLEASE RATE FROM 1 (LEAST LIKELY) TO 5 (MOST LIKELY)

2.1 **Being a Lifelong learner becomes a natural 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.**

1 2 3 4 5 6

2.2 **Every citizen of the world including those in the developing countries have easy access to learning opportunities through ICT in their different forms.**

1 2 3 4 5 6

2.3 **Learning paths are no longer organised only around centrally defined curricula. A large proportion of what is learnt in formal education is defined locally by stakeholders' dialogue.**

1 2 3 4 5 6

2.4 **In formal education, traditional classroom ceases to be the main learning environment, replaced by newly conceived learning spaces.**

1 2 3 4 5 6

2.5 **School education is no longer centred on contents organised around disciplines and moves its focus to developing the capacity and the motivation to learn.**

1 2 3 4 5 6

2.6 **Social rating (supported by ICT, network relations etc) becomes the dominant assessment and quality assurance approach in many new job profiles, professional communities and knowledge environments, and it has the main influence on recruitment, collaborations and exchange among organisations and among people.**

1 2 3 4 5 6

2.7 **Education systems contribute very substantially to social mobility.**

1 2 3 4 5 6

2.8 **Most teachers and trainers act as supporters of learning processes, rather than organisers of teaching contents.**

1 2 3 4 5 6

Comments

SECTION 3: CORE TENSIONS

IF YOU IMAGINE EDUCATION 15 YEARS FROM NOW, WHERE WOULD YOU PUT THE BALANCE BETWEEN THESE POLARITIES? (PLEASE RATE FROM 1 TO 5)

3.1	<p>Generalization VS Specialization</p> <p><i>This dichotomy relates mainly to curricular structure. Curriculum structure and design is a vehicle to shape learning system. Generalisation could be intended both as “the carryover of skills, or concepts from one setting or task to another”², or as the pedagogic design intended “to provide breadth to the curriculum and a common experience for all students. It is usually defined on an institution-wide basis and involves study in several subject areas.”³</i></p> <p><i>On the other hand, growing differentiation of social spheres, increased competition among E&T providers to find their “market niche” and emerging demands of the labour market have led, and in the future could lead even more, E&T providers to increased specialisation of their learning provisions.</i></p> <p><i>This means that curricula are designed with the purpose to support learning in achieving a sound understanding on a specific and circumscribed discipline. This has relevant implications on pedagogic methods, teachers’ training, and also on the organisation of learning provisions: E&T providers which endorse specialised curricula have usually a compartmentalised structure and operate in the form of autonomous substructures.⁴</i></p>								
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Generalization	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	Specialization		

If you do not think that the polarity is relevant or true, instead of marking a point, please explain why.

3.2	<p>Status quo/continuity VS Experimentalism and change pushed from the bottom</p> <p><i>Continuity could 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”⁵. Continuity could be the result of “protectionist” public policies that prevent private and generally new actors to interfere 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.</i></p> <p><i>On the opposite side there is pro-activity or experimentalism that could be defined as follows.</i></p> <p><i>A pro-active/experimentalist organisation or learning systems operates on the basis of “Foresight Management”, anticipating rather merely responding to change. Such a focus will turn what may appear to many to be a potentially dangerous challenge, into an opportunity.</i></p>								
	<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Status quo/continuity</td> <td style="width: 10%; text-align: center;">1 <input type="checkbox"/></td> <td style="width: 10%; text-align: center;">2 <input type="checkbox"/></td> <td style="width: 10%; text-align: center;">3 <input type="checkbox"/></td> <td style="width: 10%; text-align: center;">4 <input type="checkbox"/></td> <td style="width: 10%; text-align: center;">5 <input type="checkbox"/></td> <td style="width: 10%; text-align: center;">6 <input type="checkbox"/></td> <td style="width: 15%; text-align: right;">Experimentalism and change pushed from the bottom</td> </tr> </table>	Status quo/continuity	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	Experimentalism and change pushed from the bottom
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If you do not think that the polarity is relevant or true, instead of marking a point, please explain why.

² Educational Psychology: Theory and Practice glossary <http://www.abacon.com/slavin/glossary.html>
³ Glossary of United States Educational Terminology <http://www.uta.fi/FAST/US5/REF/glossary.html>
⁴ See “Three dialectics in higher education future” Peter Ewell, 2003 Project on the Future of Higher Education <http://www.pfhe.org>
⁵ See “L-Change-European Observatory on IST Related Change in Learning Systems IST-2000-26226” scenario and forecast report

3.3 Supply VS Demand

“Supply” refers to a scenario in which most of education is still organised by education and training providers. The opposite polarity refers to a “demand-led” education, in which individuals and groups are the main organisers of their own learning experience

Supply	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	Demand
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If you do not think that the polarity is relevant or true, instead of marking a point, please explain why.

3.4 Systems adapt to individuals VS individuals adapt to systems

This polarization can be explained as follows: at one extreme, it is education that adapts to growing differences among learners. As an opposite scenario, education tries to make different learners converge towards unified education provision.

Systems adapt to individuals	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	Individuals adapt to systems
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If you do not think that the polarity is relevant or true, instead of marking a point, please explain why.

3.5 Adult learning organised around compulsiveness and urgency VS Interest and motivation as main drivers of learning in adulthood

At the extremes of this polarisation stand the following scenarios: the greatest part of adult learning is organised around compulsiveness and urgency of professional/organisations requirements or, alternatively, most of adult learning is organised around interest and intrinsic motivation to learn.

Compulsiveness and urgency	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	Interest and motivation
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If you do not think that the polarity is relevant or true, instead of marking a point, please explain why.