



ITEC - WP 11

D11.3. – FIRST REPORT FROM THE HIGH LEVEL GROUP

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Executive summary

The iTEC High Level Group has been successfully established with an initial remit to:

- Give a view on and contribute to the decision-making criteria that will be needed in order to decide what prototypes are taken forward for large-scale testing;
- Provide feedback on the WP5 evaluation plan;
- Gather, sift and shape information from the evaluation of scenarios to produce a set of recommendations for policy makers in Europe.

The HLG has reviewed iTEC project content and progress and developed recommendations for mainstreaming and up-scaling associated practices.

As the iTEC project has moved from a centralised approach towards a bottom up approach, the HLG has developed its most recent recommendations to support that bottom up approach. The peer-learning workshop held in September allowed a detailed reflection on progress and practices and contributed to development of recommendations. The recommendations focus on practical developments that are intended to encourage teachers to reflect on their work, to share and learn from other teachers and to build communities of practice.

In brief, the recommendations are associated with:

- Establishing a review framework
- Intervening at the level of initial teacher training through focused pilot actions
- Supporting MoEs in spreading iTEC practices

In addition the HLG recommends changes in initial teacher training and continuing professional development that strengthens awareness of the opportunities and leading practice and pedagogies associated technology for learning.

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1 INTRODUCTION

1.1 PURPOSE OF THIS DELIVERABLE

This is the first report from the work of the iTEC High Level Group, a public deliverable that aims to summarise the activities of this advisory body in the first 24 months of the project carried out via annual meetings and in a peer learning workshop. It includes both initial recommendations made by the HLG following its second meeting in May 2012 and a further set of recommendations that were produced following the peer learning workshop in September 2012.

In a final section, the document outlines the work plan and activities that the HLG will carry out in the second half of the project.

1.2 PURPOSE AND SCOPE OF THE TASK

Deliverable 11.3 is an output of iTEC task 11.3 on Mainstreaming iTEC Scenarios and Results. At the time of writing this deliverable, complete evaluation results are available from two of the five iTEC validation cycles. In October 2012, validation of the main technology developments in the project is about to commence.

During the first half of the project, the HLG has made recommendations related to the upscaling and mainstreaming of iTEC results primarily based on its analysis of: iTEC scenarios and Learning Activities; the project evaluation methodology and results from the evaluation of the first two cycles of school pilots; and feedback from project partners concerning how they intend to exploit iTEC results as summarised in the project Exploitation Plan.

1.3 RELATIONSHIP WITH OTHER TASKS/DELIVERABLES

- The iTEC Evaluation Plan (D5.1 in M6)
- Evaluation Interim Reports (deliverables D5.2 in M11, D5.3 in M23)
- iTEC Exploitation Plan versions 1 and 2 (deliverables D11.5.1 in M12, D11.5.2 in M24)

1.4 STRUCTURE OF THE DOCUMENT

The document provides summaries and conclusions from two meetings of the HLG and from a HLG peer learning workshop with other stakeholders plus the full recommendations made at each stage of the project. The final section includes the HLG workplan and activities until the end of the project in August 2014

1. Introduction
2. HLG Terms of Reference
3. Summary of the First High Level Group Meeting
4. Summary of the Second High Level Group Meeting
5. Initial HLG recommendations in May 2012
6. Summary of Peer Learning Workshop in September 2012
7. iTEC HLG Recommendations in October 2012
8. Workplan and future activities 2012-2014
9. Conclusions

1.5 IMPACTS OF THE DELIVERABLE

1.5.1 iTEC PROJECT

1.5.1.1 Impact on iTEC Milestones

This deliverable was produced in October 2012 two months later than originally planned for D11.3 set in the project Description of Work (M24 in the DoW). The reason for this delay was down to the impossibility of arranging a peer learning workshop until after the main vacation period of July and August. This workshop was held on the 19-20 September 2012.

The work of the HLG and this deliverable is particularly intended to inform the production of later versions of the iTEC Exploitation Plan (D11.5.3, D11.5.4) and the strategy that the iTEC Consortium finally adopts to upscale and mainstream iTEC results after the end of the project.

1.5.1.2 Impact on iTEC 'Risk Analysis'

The first report from the HLG has no impact on the risks that are currently discernable in the project. The final version versions of this document will report on the risk that the project may not have a long-term, sustainable impact on schools.

1.5.2 ETHICAL ISSUES

The project does not foresee any ethical issues that need to be addressed by the Exploitation Plan.

1.5.3 IPR ISSUES

There are no IPR issues identified in the first HLG report. The HLG will consider any IPR issues that could inhibit the mainstreaming of iTEC results in Years 2 and 3.

2 HLG TERMS OF REFERENCE

The iTEC project Description of Work references the 2007 OECD report, *Evidence in Education: Linking Research and Policy*, which stresses that policy-makers should be encouraged to think carefully about the importance of quality evidence and the need to trust the source of information. The study suggests, for example, that there is a need for a “gatekeeper” to filter all available information such that only the best-available evidence is used for decision making. To this end, OECD highlights the need for information brokerage.

In the case of the iTEC project, this translates into the decision to create a high-level group of key decision shapers that will act as a gatekeeper and information broker in relation to the Ministries of Education in Europe and whose terms of reference are to:

- Give a view on and contribute to the decision-making criteria that will be needed in order to decide what prototypes are taken forward for large-scale testing;
- Provide feedback on the WP5 evaluation plan;
- Gather, sift and shape information from the evaluation of scenarios to produce a set of recommendations for policy makers in Europe.

The HLG can also be regarded as having quite a strategic role in the project with regard to the mainstreaming of iTEC results and ensuring that these impact of the educational reform process in Europe.

During the project, EUN also aims to progressively empower the HLG to become a permanent body within the framework of EUN after the end of the iTEC project. In this way, the group will continue to act as a broker of information between Ministries of Education throughout Europe as well as an important source of knowledge and information on the educational reform processes in Europe for EUN. Furthermore, as a permanent body, the group will also contribute to the sustainability of the iTEC project objectives, after the completion of the project tasks.

2.1 HLG COMPOSITION

The original intention when writing the iTEC proposal was to invite all MoE in the project to nominate one representative per country to participate in the HLG. During the formation of the group, however, it was decided that a slightly smaller group of 8-10 experts drawn from all 30 Ministries participating in European Schoolnet would be more effective and that individuals should also participate in a personal capacity and not represent their country.

In March 2011, Ministries of Education were invited to propose both pedagogical and ICT experts with experience of working at a senior level related to policy development. In October 2012, the HLG has 10 members including two former Ministers of Education, current heads of national ICT agencies and other leading experts in ICT implementation in schools.

The HLG Chair is Eduardo Marçal Grilo, former Minister of Education in Portugal and current administrator of the Calouste Gulbenkian Foundation. Jan Hylén, a former Adviser in the Swedish Ministry of Education was General Secretary to the HLG until June 2012. He was succeeded in July 2012 as General Secretary by Gavin Dykes from the UK whose current roles include Senior Director of International Relations for the New Media Consortium, Fellow of Education Fast Forward, and Programme Director for the Education World Forum. Profiles of HLG members are included on the project web site: <http://itec.eun.org/web/guest/high-level-group>

HLG Members

Eduardo Marçal Grilo, Portugal (Chair)

Gavin Dykes, United Kingdom (General Secretary)

Herbert Gimpl, Austria

Øystein Johannessen, Norway

Toine Maes, the Netherlands

Bálint Magyar, Hungary

Maciej Marek Syslo, Poland

Henri Monceau, Belgium

Alain Séré, France

Dr. Antreas S. Trakoshis, Cyprus

3 FIRST HLG MEETING

At its first meeting in 31st May -1st June 2011, the High Level Group particularly reviewed the iTEC Evaluation Plan and considered the feedback received from the Pedagogical Board. This meeting included a presentation by Manchester Metropolitan University that is leading the evaluation work in WP5.

The meeting also considered some of the early iTEC scenarios together with the feedback that had been given to the scenario developers by the project Pedagogical Board. In particular, this discussion highlighted:

- A potential risk if iTEC focuses too much on constructivist theory. The HLG reinforced the comments from the Pedagogical Board regarding the scenarios being too similar and too much centred around project based learning. It was noted that, in some countries, the political trend is now shifting away from constructivism and student centred learning and perhaps that should be taken into account.
- That the project should consider carefully what should guide iTEC scenario developers – political trends, teacher needs, pedagogical theories...?
- The complexity of the evaluation. What is being evaluated and what should be evaluated? It also raises the question of the project's approach to teachers – should it help teachers or change them? If the latter is the case, then the ambition level of the project may be set too high, as there are limits as to how this could be achieved within the lifetime of the project.

Following the meeting, the initial observations and recommendations to the iTEC project partners from the High Level Group were as follows:

- The HLG agreed with the feedback obtained from the Pedagogical Board and particularly the suggestion that scenarios developed in future project cycles should be more diverse and less focused on project-based learning. Consideration should also be given to developing scenarios that will help Ministries of Education across Europe to address common educational problems that in some countries may already be part of the existing political agenda.
- iTEC scenarios do not have to be developed from scratch. The project may benefit from giving more consideration to innovative designs for the future classroom that are already being piloted or implemented in some countries or are in the process of being validated by some ICT suppliers.
- High Level Group members and project partners should pool their resources in order to more specifically identify the key decision shapers (e.g., civil servants, teacher union leaders and journalists) in each country where an iTEC pilot is taking place.
- The iTEC evaluation plan is addressing the right research questions but the project should also:
 - Be clear in terms of the extent to which it is trying to support and help teachers to do their jobs more effectively and/or whether it is also engaged in trying to change current practice. This issue is likely to have a major impact on the extent to which iTEC scenarios can be mainstreamed within the lifetime of the project.
 - Explore to what extent the evaluation activities can measure the impact of the iTEC scenarios on students' learning.
 - In Year 3 and 4 of the project, look at those schools that implemented the initial scenarios to see if any of these scenarios are still in use. This could provide the project with valuable information on how scenarios work and develop over time.

4 SECOND HLG MEETING

At its first second meeting on the 8th-9th May 2012, the High Level Group initially considered:

- The report of the conclusions from the first project review in November 2011.
- The revisions that had been made to the iTEC Evaluation Plan following the first project review as well as the conclusions from the evaluation of the first school pilots.
- The possibilities offered by the EUN Future Classroom Lab to upscale and mainstream project results.

The main focus of the meeting, however, was on ‘mainstreaming challenges’. This agenda item was informed by three discussion papers by HLG members that were introduced by their authors:

Toine Maes – Wikiwijs: the Dutch national initiative on OER

Øystein Johannessen – the National Digital Learning Arena (NDLA) in Norway

Bálint Magyar – Developing ICT infrastructure for pedagogical, methodological reform in Hungary

The discussion papers provided the meeting with a frank assessment of the policy challenges involved in initiating, implementing and sustaining large scale ICT initiatives in education and are not intended for publication.

The main conclusions from this discussion were:

Issue of up-scaling and mainstreaming

- iTEC has the potential to facilitate the creation of innovative micro-laboratories within the various cycles of pilots which will test quite challenging and innovative learning stories/activities. The Evaluation Report on the first iTEC cycle concludes that the piloting has worked very well and that participation in the project has been perceived in a positive way by teachers in schools.
- The project now has to spread these good results and it is important that the results are not limited only to the schools participating in the various cycles of iTEC, but that it can find the right mechanisms to spread them at various levels (teachers, schools, regions, national ministries, European level, the European Commission).
- In terms of the take-up of results, the iTEC HLG particularly suggested that the project needs to make a distinction between up-scaling and mainstreaming:
 - Up-scaling successful scenarios by Ministries is something that should be within the ambition level of the project and will be something that is expected by the European Commission as part of the project exploitation activities. Following positive feedback from piloting scenarios, it can be expected that MoE will wish to gather more evidence by the deployment of a larger scale experimentation at national level; for example, by conducting a larger, longitudinal impact study.
 - Mainstreaming successful scenarios, however, and taking these to very large scale will require an implementation and adoption plan to be developed within the national systems based on the work done during the up-scaling phase.

Issues related to the cooperation with ministries of education

- The HLG suggested that iTEC partners should be encouraged to provide more schools in the pilots in order to meet the expectations of the Commission that the project will validate scenarios at really large scale and other MoE not in the project should be encouraged to join iTEC as Associate Partners and provide additional schools for the pilots.

- iTEC should become one of the flagship experimental projects in each ministry of education taking part in iTEC, and there should be more communication at national level by ministries of education to make iTEC a challenging experimental project.
- For the time being, there is the impression that teachers are asked to participate in iTEC on top of their other assignments (as they may do in many other much less strategic projects) and that no specific arrangements have been organized to support them. It is of vital importance that iTEC should be considered at national level as one of the most innovative project regarding the design of the class of tomorrow.

One recommendation or message that could be provided by the iTEC HLG concerns the way iTEC could be promoted at national level.

- A task force composed by a limited number of MoEs engaged in iTEC should be created by European Schoolnet, and its role should be to discuss the mechanisms and conditions for further up-scaling of the scenarios and learning stories developed within iTEC. In addition, this task force should also concentrate on how to meet the challenges and requirements of future community programmes, which have made upscaling and mainstreaming innovation a necessary condition for funding and supporting ambitious cooperation projects in this specific field.

Issue of sustainability after the end of the iTEC funding period

- Learning stories and iTEC scenarios prove to be very successful at the level of the pilot schools which experimented with the scenarios. It is absolutely essential to spread these scenarios to other teachers who are not part of the iTEC communities. EUN has to analyse what is required in order to ensure that learning stories are widely adopted by other schools. There are some that could probably be adopted without further assistance, while others may require specific support via webinars, learning events to be organized etc. EUN has to provide a complete approach so that any school or class which would like to adopt an iTEC scenario can be supported in doing this both during the second two years of the project and also after the project ends.
- There must be a clear dissemination strategy towards teachers at both national and pan-European level; if teachers adopt these learning strategies, then we will have another way to demonstrate how mainstreaming can take place, more directly at the project teacher level rather than via the institutional system as such. This will also be something that is expected by the Commission. If we are able to put in place a clever dissemination approach towards the EUN community of teachers, and if we succeed in having a lot of schools which try to take on board, test and use some of the learning stories which have been created and validated by pilots, then we have already started the mainstreaming process even during the iTEC period.

5 INITIAL HLG RECOMMENDATIONS

Following its second meeting, the HLG published its first set of recommendations in July 2012. These can be downloaded from the project web site <http://itec.eun.org/web/guest/high-level-group>

5.1 RECOMMENDATION TO EUROPEAN TEACHERS

The iTEC High Level Group (HLG) would first like to thank and congratulate the teachers involved in iTEC, both for their vision as co-developers of future classroom scenarios and also for their hard work and commitment in validating innovative learning activities derived from these scenarios over the five project cycles.

Since teachers are the lynchpin of change in any educational development process, it is essential that innovative practitioners should be at the centre of this project and directly shaping new teaching and learning processes involving ICT. Teachers in the large-scale pilots are also key, first by empirically testing iTEC scenarios in real world conditions in order to help assess their potential to be taken to scale, and then by acting as iTEC ambassadors and encouraging other teachers across Europe to exploit the first results of the project.

The High Level Group is conscious that large-scale adoption of iTEC scenarios by teachers will increasingly be required as part of a bottom-up mainstreaming process in order to complement the more top-down mainstreaming strategies of ministries, industry partners and the European Commission. ***As the iTEC project approaches the half way stage in September 2012, therefore, the High Level Group encourages teachers throughout Europe to link to the iTEC teachers' community¹ and profit by experimenting with and adopting some of the initial iTEC learning activities in their own classrooms. As part of this process, outreach should be supported and facilitated by mediators such as teacher unions, national agencies etc.***

5.2 RECOMMENDATION TO EUROPEAN MINISTRIES OF EDUCATION

The iTEC project is currently the largest and potentially most strategic initiative in Europe concerned with reflecting on and shaping the school of 2025. 14 Ministries of Education (AT, BE/FL, CH, DK, EE, HU, IL, IT, FR, LT, NO, PT, SK, TR) joined as partners in the project when it commenced in September 2010 and, since then, additional Ministries at national level (CZ, FI) along with regional educational authorities have joined the project as Associate Partners.

With positive results currently emerging from the evaluation of the first phase of the project, the High Level Group now calls on other educational policy makers and authorities across Europe to join with iTEC partners in order to rethink how ICT can impact on teaching and learning in the future classroom and explore how iTEC results can support their own ICT strategies and priorities.

The major challenge for policy makers is how to facilitate widespread adoption of innovative practices involving ICT and then mainstream these practices into the everyday experience of teachers and learners in European classrooms. This is happening at a time when, as a result of technological and sociological trends, our schools are likely to be confronted with new organisational challenges and may particularly require new approaches to classroom and whole school management of ICT. Studies of the underlying change processes in schools will also increasingly be required that examine the extent to which informal learning opportunities outside the school involving ICT and social media are impacting on how learning is delivered within the classroom.

In the next few years, Ministries in the iTEC project and the High Level Group will be working together to examine these and other challenges confronting educational policy makers as they seek to engage pupils and improve teaching and learning by mainstreaming innovative use of ICT

¹ <http://itec.eunorg/web/teacher-community>

in our schools. ***The High Level Group, therefore, encourages policy makers to connect with the iTEC project, capitalize on the expertise and support provided by iTEC partners and work with European Schoolnet to help embed innovative ICT practice in schools on a systemic level.***

5.3 RECOMMENDATION TO ICT VENDORS

With its objective of mainstreaming innovative use of ICT, the iTEC project has been designed from outset as a multi-stakeholder partnership involving policy makers in the public sector working alongside researchers from the Technology Enhanced Learning community and leading ICT vendors. Promethean and SMART Technologies, two of the leading Interactive Whiteboard suppliers to education, are iTEC partners. Since the project commenced, companies such as Acer, Microsoft and RM Education have also joined iTEC as Associate Partners.

In addition, over a dozen Industry partners² are now supporting the European Schoolnet Future Classroom Lab³ which was launched in January 2012. This new initiative is closely linked to iTEC but independently financed in order ensure that iTEC results can be sustained after the end of the project funding.

The Future Classroom Lab in Brussels is an important new facility for education in Europe. It provides a reconfigurable teaching and learning space, fully equipped with the latest technology, within which European Schoolnet will showcase scenarios for teaching and learning in the future classroom that are being developed in the iTEC project. Around these, the Future Classroom Lab is also providing training, continuing professional development workshops and other events for teachers, ICT advisers and policy makers at both national and regional levels.

The High Level Group encourages the ICT industry to engage with the iTEC project and the Future Classroom Lab and to work closely with Ministries of Education in order to rethink how teaching and learning can be implemented in the future classroom. Educational ICT suppliers are particularly invited to showcase their own designs for new learning spaces in iTEC and the Future Classroom Lab and demonstrate how their technology can support innovative pedagogical approaches to 21st century teaching and learning.

5.4 RECOMMENDATION TO THE EUROPEAN COMMISSION

The iTEC project and the work of the High Level Group directly feeds into the European Commission's Europe 2020 strategy⁴ and ET 2020 framework⁵ and supports the Digital Agenda for Europe⁶, particularly its specific focus on mainstreaming eLearning as a way modernizing education in Europe and enhancing Europe's competitiveness. iTEC also has the potential to feed into new projects that will be supported by the Commission's new Creative Classrooms' initiative⁷.

The High Level Group would also like to draw the attention of the Commission to the fact that the iTEC project is now part of a 'family' of related projects that has been designed as part of the long-term strategy of European Schoolnet as defined by its 30 supporting Ministries of Education.

² Acer, Apple, eInstruction, Fourier, Mimio, Panasonic, Planet PC, Promethean, Microsoft, SMART Technologies, RM Education, Texas Instruments. (Since these recommendations were made, Cisco and Samsung have become FCL industry partners).

³ <http://fcl.eun.org>

⁴ http://ec.europa.eu/europe2020/index_en.htm

⁵ Strategic Framework for European cooperation for education and training ET 2020

http://ec.europa.eu/education/lifelong-learning-policy/policy-framework_en.htm

⁶ Action 68 of the Digital Agenda for Europe calls upon Member States to "mainstream eLearning in national policies for the modernisation of education and training, involving curricula, assessment of learning outcomes and the professional development of teachers and trainers." Digital Agenda for Europe, Pillar: Enhancing e-skills, http://ec.europa.eu/information_society/newsroom/cf/fiche-dae.cfm?action_id=226

⁷ Call for Proposals EACEA/20/2012 http://eacea.ec.europa.eu/lfp/funding/2012/call_et_2012_en.php

These projects all have a central focus on mainstreaming and sustaining innovative practice in schools involving ICT and are being coordinated under the umbrella of the independently financed European Schoolnet Future Classroom Lab initiative.

Associated projects include: the CPDLab project (Lifelong Learning Programme) which is developing continuing professional development courses for teachers, including a course based on iTEC future classroom designs; and the new LivingSchoolsLab project (FP7 Programme), commencing in October 2012, which will put in place a permanent network of schools in Europe for ICT validations and support the development of whole school approaches to ICT deployment and the mainstreaming of innovative practice.

iTEC, together with these projects and the European Schoolnet Future Classroom Lab, therefore, provides a unique, multi-stakeholder platform within which the Commission can come together with Ministries of Education and ICT suppliers, not only to discuss how existing and emerging technologies can have a transformative effect on teaching and learning processes, but also to analyse the enablers and roadblocks to educational reform and mainstreaming of innovative practice.

The High Level Group encourages the Commission, member states and Industry to continue working together on defining the requirements for successfully mainstreaming innovative teaching and learning practices involving ICT. It may also be important to recognise that the up-scaling of iTEC results at national level could be seriously constrained by the current economic situation in member states as well as inappropriate regulatory systems and financing mechanisms. It is possible that systemic mainstreaming of eLearning in Europe may require quite fundamental changes to how we support and fund education reform that involves ICT. The High Level Group will comment in more detail on this issue in future recommendations.

6 SUMMARY OF PEER LEARNING WORKSHOP

Over 20 participants attended the Peer Learning Workshop in September 2012. Participants included HLG members, EUN Steering Group representatives from Ministries of Education, representatives of Promethean and SMART, teachers working on iTEC pilots and representatives of the iTEC team. The workshop was designed to engage participants in discussion, and to ground that discussion in the reality of practice as demonstrated by the participating teachers. It was then intended to build towards discussion and analysis of mainstreaming and up-scaling issues through experience from Ministries and HLG members.

The stated aims of the High Level Group workshop were :

- to bring group up to date with the iTEC project
- to learn about learning stories and learning activities from practitioners
- to explore and clarify opportunities for up-scaling and mainstreaming innovative practice
- to develop views of the challenges associated with up-scaling and mainstreaming
- to reflect on mainstreaming opportunities
- to develop the initial HLG mainstreaming recommendations

Initial presentations updated workshop participants on iTEC's programme of activities and also described outcomes of recent research into the use of ICT for education in European schools. The (as yet unpublished)⁸ research provided background data and statistics regarding technology infrastructure and its accessibility to learners in schools. The research also reflected the extent of teacher training associated with ICT use.

Key findings from the research included that may have an impact on mainstreaming and upscaling iTEC practice were:

- Overall school profile affects the frequency of students' ICT use for learning. It was noted that between 25 and 30% of students are in highly digitally supportive schools
- Between 18 and 28% of students are taught by digitally confident and supportive teachers
- Student's ICT use during lessons still lags far behind their ICT use outside school: an issue affecting student's confidence in their digital competences - Between 30 and 35% of students are digitally confident and positive students and have high access to ICT both at home and at school.

The research was discussed and with the following observations:

- The research mainly reflects the use of ICT in the classroom. If existing good classroom level use of ICT is approximately 33%, should iTEC be working on extending the use of that 33% or, when it comes to mainstreaming, should iTEC focus its attention on persuading and influencing use and better use among the other 67%?
- Use of ICT in schools might also be related to the Digital Agenda Scoreboard, for comparisons with development of the use of technology in the wider community.
- Use of technology can aid transparency and open-ness in teaching and learning through recording and tracking of work using, for example, VLEs.

Presentations were then given to the workshop by two iTEC practitioners, one from Spain, and the other from England. The first presentation reflected on an iTEC project to introduce use of iPods to aid Design and Technology teaching and learning. The Teacher described "Using Innovative Technologies to Embed Exam Practice in Learning Activities" associated with the iTEC learning story "Embedding Exam Preparation". The intention was to motivate students to revise using

⁸ Survey of Schools: ICT in Education, <http://essie.eun.org/>

different approaches which included using iPods to provide access to Apps, online homework, QR codes of revision sites.

The practitioner noted that having a wide range of technology available in her classroom led to her rethinking her teaching strategies. The use of innovative technology therefore had helped to drive pedagogical development.

The second presentation addressed mathematics exam preparation. Work was conducted in class and on line with independent learning and collaboration between pupils in different countries encouraged. TeamUp was used successfully to establish teams. Some initial challenges were encountered with the software, distractions with using the VLE and with use of some software from home. Overall the project was considered extremely successful; it increased pupil enjoyment, it encouraged collaboration and creative learning, it encouraged independence in learning and quickly developed ICT skills. It was noted that use of the technology enabled bridging of school and home activity, encouraged students to help each other more, and the technology quickly became part of everyday life.

Discussion of the iTEC classroom practice led to observations including:

- There were benefits in students having their own device. It was particularly noted that benefits were not simply to do with owning the hardware. Importantly there were benefits associated with developing and owning the information held on the device, and enjoying the freedom to make choices around use of that information.
- Use of the technology seemed to give license to and to encourage students and teachers to collaborate, co-design learning and to progress.
- Key drivers for the effective use of technology include teachers and also the changed relationship between students and teachers such that responsibilities can be shared more evenly.

Workshop participants discussed key issues in smaller groups. Drawing on the experience of the practitioners, the country representatives and experts, and HLG members, the following observations were made:

- Personal ownership of devices and information can play an important role in motivating students and driving their response to technology.
- In many cases there appears to be insufficient appropriate ICT teacher training within Initial Teacher Training. The lack of ICT teacher training impacts negatively on the development of teachers' pedagogical skills, including judgment of when to use technology.
- The age profile of teachers as well as cultures within education can lead to resistance to change when it comes to innovative teaching methods. Focus on test scores can add to this resistance.
- The success of learning stories is dependent on the levels of motivation of teaching staff
- The importance of the role of innovative teachers, and creating a culture of those open to innovation through institutional support cannot be over-emphasized when considering mainstreaming
- A further consideration may be teachers' ownership of learning stories
- 'Hero' teachers cannot easily be mainstreamed. However, iTEC may be able to learn from other models which may include:
 - o Apple's Distinguished Educators model
 - o Appointment and responsibilities of Advanced Skills Teachers in England. Funding to support the appointment of European Advanced Skills teachers and their status and their practice through COMENIUS and the European Commission might be considered
 - o Teach for America and Teach First models that seek to attract teachers with specific skills and outlook into teaching.

Resources

- Availability of technological and pedagogical resources is critical to successful up-scaling and mainstreaming. However, as noted in the ESSIE study, there is no correlation at EU level between level of computer provision in schools and frequency of use by students.
- Fundamental issues are more associated with pedagogies, rather than the technology, although we must still recognize that a lack of basic infrastructure in some countries should not be underestimated in terms of it being both an actual and perceived roadblock.
- “Bring Your Own Device” approaches may offer opportunities, particularly as these approaches gain support
- Current funding issues are having a significant impact, not only on the availability of resources, but also on the confidence and motivation of students, parents and teachers. That social impact may make scaling of new and innovative practices yet more challenging.

Mainstreaming, up-scaling and profile raising

- Compliance with and focus on existing structures, regulations and processes may act as barriers to innovation. For example, the requirements of prescribed curriculum, assessment and timetables may at the very least, provide reasons for teachers not to adopt new practice.
- It may help to identify what it is likely to take for practice to “go viral”.
- Demonstration of innovative learning practices could be arranged in centres – these could include iTEC schools, City Learning Centres such as those once organized across England, Learning Labs that have been established in some locations
- Determining what amounts to compelling evidence for policy makers could be helpful. It was noted however, that evidence gathering is not currently part of the iTEC project. It should be noted that evidence is being gathered through the Manchester Metropolitan University evaluation in WP5 of the iTEC project, which looks at a range of factors including teaching practices and learner engagement .
- Video representations of new practice may provide a powerful way of spreading practice, and there are some important lessons to be learned in the development of video that is of appropriate quality and content. Some of the lessons learned from the experience of the development of TeachersTV in the UK may be helpful.
- Context is critical with some approaches critical in some countries, but not necessarily in others. As is often the case, one size does not fit all.

A number of additional observations were made in discussion when the groups came back together in a plenary session. These observations included:

- Models can be dangerous, particularly if they seek to “productize” practice. It is critical to recognize key elements and to work with these.
- The pedagogical capability and strength of teachers is a critical factor, and scientific development of those capabilities and strengths is seen as crucial.
- Whether technology was essential for some of the scenarios was questioned. Teaching and learning perhaps could, in these cases, be improved without computers. As the Portuguese TV advertisement of a particular product says, “Could you do without it?” Then it answers, “Yes, but it wouldn’t be the same.”

7 ITEC HLG RECOMMENDATIONS IN OCTOBER 2012

Drawing on the HLG's workshop and its previous work, potential policy recommendations fall into three broad areas. These areas are :

- Establishing a review framework
- Intervening at the level of initial teacher training through focused pilot actions
- Supporting MoEs in spreading iTEC practices

The iTEC HLG considers that by addressing these areas, mainstreaming and up-scaling of iTEC practices will be strengthened.

Establishing a review framework

- A "technology use maturity" self review could be developed and used by schools and their stakeholders to review, identify priority actions and create agreed plans for their use of technology. Such a framework can also identify staff development needs, can bring the school community together to share views of progress and development and could be built upon, through external assessment of plans and reviews, to provide external recognition or celebration of progress or success (through charter marks and local, regional or national awards)
- The iTEC HLG recommends that Ministries work together to develop and disseminate an appropriate review framework that assists schools in planning their development of ICT and iTEC practices.

Intervening at the level of initial teacher training through focused pilot actions

- The role of teachers is widely perceived as critical in raising standards and also in developing and transforming education. If iTEC practices are to be developed and adopted, then teachers should be supported in developing appropriate skills, knowledge and understanding, as well as the confidence to embed technology in learning. An important first step in this area seems to be to ensure that initial teacher training assists trainee teachers in developing their associated competencies.
- The iTEC HLG recommends that Ministries review their initial teaching programmes to ensure that they provide trainee teachers with the skills, knowledge and understanding to adopt ICT and iTEC practices with confidence.

Supporting MoEs in spreading iTEC practices

- A range of actions could be used to help dissemination and support for iTEC practices. These actions could include the following:
 - o Development of a community of teachers with a specific responsibility for advocacy, stimulation and support of iTEC practices including among existing teachers
 - o Organisation of an event, or series of events such as a Connected Teachers Month, similar to that adopted in other countries of the world
 - o Support for a wider group of iTEC advocates through provision of appropriate presentation materials
 - o Practical support to specific Ministries seeking concrete support in their development of ICT and iTEC practices
- The iTEC HLG recommends that European Schoolnet identifies specific interested ministries with which to work and with them establishes a range of further activity that may act as a blueprint for mainstreaming iTEC both in these countries and beyond.

8 HLG WORKPLAN AND FUTURE ACTIVITIES 2012-2014

The HLG work plan and future activities build on build on the recommendations in section 7 above and fall into seven areas:

Further details of the planned activities for the HLG in each area are given below.

a) **Establishing a review framework**

It should be noted that the HLG can provide only guidelines for the structure and outline of framework. Steps will include:

- Identify and review existing frameworks by April 2013
- Suggest guidelines for building on these existing frameworks, and approaches to their dissemination, publication and use by July 2013
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b) **Intervening at the level of initial teacher training through focused pilot actions**

- Identify a small group of Ministries with which to work. Ministries will be those keen to embed iTEC practices in initial teacher training. [Note that interventions in initial teacher training could, if appropriate, contribute to continuing professional development] by April 2013

Work with the small group of Ministries to develop concrete case studies for initial teacher training interventions by December 2013

c) **Supporting MoEs in spreading iTEC practices**

- The HLG will seek to work with a small group of Ministries that are engaged in up-scaling iTEC practices and impact in two ways.
- In the first instance, HLG will work with the small group of Ministries to initiate an ambassador programme by October 2013
- Secondly, the HLG and European Schoolnet will work to provide practical support and advice in development of national exploitation strategies. In this second case, a campaign approach is proposed, in order to sustain exploitation. A plan of campaign will be established by December 2013
- Thirdly, Ambassadors and Advanced Skills Teachers are two of the existing roles that have been developed in different countries in order to encourage spread of good practices and new pedagogies and to encourage community building. Assessment of the potential to build on these roles by including activities associated with iTEC practices will be carried out with the small group of Ministries. A view of the success of these roles and activities in mainstreaming iTEC activity will be developed to form an evidence base on which other Ministries can base their decisions.
- Finally, an iTEC event will be planned for the summer of 2014 to promote and disseminate iTEC outcomes and to act as a stimulus to policy makers, education leaders and teachers to engage and support iTEC, its wider adoption and its embedding within education systems and communities/

9 CONCLUSIONS

In the first two years of the project, the iTEC High Level Group and met its objectives. In Year 1, it provided valuable feedback on the project evaluation methodology and early project scenarios and Learning Activities. In Year 2, the HLG started to identify a number of important issues relating to the mainstreaming of project results that are informing the development of the project's Exploitation Plan.

With the peer learning workshop held in September 2012 and the recommendations that followed this event, the project is currently moving forward to continue to provide high level support and advice to the iTEC project and to develop the basis for mainstreaming and upscaling. In line with iTEC developments that, on balance, are moving more towards supporting organic development from a position of centralisation, the HLG is, through its recommendations and actions encouraging strategies, tools and structures that reinforce that organic development.

In addition to the broad strategies for organic development, the HLG plans actions that seek to take narrower, deeper action in specific countries to help remove the blockages to iTEC based development and to encourage widespread realisation of the benefits that iTEC practices can bring to learning.