

## ITEC - WP <5>

### <D5.3.> - <EVALUATION INTERIM REPORT TWO>

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CONTRACT NO	2577566
DATE	31/08/2012
ABSTRACT	Deliverable 5.3 Evaluation Interim Report Two (see below for executive summary)
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WORKPACKAGE	WP 5
CONFIDENTIALITY LEVEL1	Public
FILING CODE	ITEC-D5.3_MMU_V1.Doc
RELATED ITEMS	

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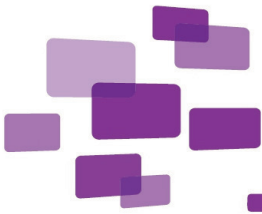
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## DOCUMENT HISTORY

Version	Date	Reason of change	Status	Distribution
V1	16/08/12	1st draft	Draft	MMU
V2	14/09/12	Revised following reviewers' feedback.	Final deliverable	MMU
V3				



# iTEC

Designing the future  
classroom

## D5.3 Evaluation Interim Report Two

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31<sup>st</sup> August 2012

<http://itec.eun.org>

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## Executive summary

Work Package 5 is concerned with the evaluation of the piloting activities undertaken in iTEC. The evaluation includes teacher surveys, case studies, teacher-authored multimedia stories (documenting and reflecting their experiences) and National Pedagogical Coordinator (NPC) interviews. This second annual report (D5.3) covers the first two iTEC cycles and will include a summary of final results from the evaluation of Cycle 1 (M12-M18), interim findings from the evaluation of Cycle 2 (M18-M23), and their implications for subsequent iTEC cycles. It should be noted that the evidence and detailed analysis of data for each cycle is presented in separate evaluation reports (see [http://itec.eun.org/c/document\\_library/get\\_file?uuid=24f3c5fa-5786-427e-a2ef-06df033afe4b&groupId=10136](http://itec.eun.org/c/document_library/get_file?uuid=24f3c5fa-5786-427e-a2ef-06df033afe4b&groupId=10136)). This deliverable provides a synthesis of the key findings.

D5.3 first describes how relevant recommendations and suggestions from the first periodic review were taken into account. The objectives of the evaluation (presented in the Evaluation Plan) were reviewed and in particular reflect a shift in focus from identifying pedagogical change to exploring potential benefits of iTEC resources and technologies. In addition, further detail was provided in the Evaluation Plan in relation to the focus of the research instruments, how the evaluation questions would be evidenced, and specifying that case study raw data would be required from NPCs from Cycle 1, rather than from Cycle 3. The revised Evaluation Plan was resubmitted in December 2011.

In Cycle 1, 231 teachers and 278 cohorts of learners from 17 countries participated in the evaluation of two Learning Stories: The Outdoor Study project (requiring teams of learners to collect data - scientific and/or multimedia - outside the classroom) and the Bring in the Expert project (requiring teams of learners to collaborate with outside experts via communications technologies).

Teachers were very positive about the experience and enjoyed opportunities to experiment and take risks. Most teachers implemented the Outdoor Study project and teachers from seven countries (BE, FR, HU, IT, LT, PT, SK) were confident it could lead to innovation in the classroom. Teachers who implemented Bring in the Expert project (AT, FI, HU) felt that it too could lead to innovation in the classroom. Other benefits were the adoption of new pedagogical strategies (particularly collaboration and group work), increased student autonomy, increased use of digital tools in the classroom, positive impact on teacher and student attitudes, perceived potential to impact positively on a range of learning outcomes.

Unsurprisingly, ICT infrastructure, training and in-house technical support were considered essential for scaling-up. Enablers included teacher experience, teacher motivation, the support of colleagues, iTEC resources (the Learning Story guidance, and a widget for forming groups called TeamUp, training and support, intuitive technologies, digital tools for communication and collaboration, and school ethos/culture. Challenges included insufficient ICT infrastructure (access to ICT, reliable Internet provision), time for planning and implementation, ICT compatibility problems, and students adapting to unfamiliar pedagogical approaches.

In Cycle 2, 259 teachers and 298 cohorts of learners from 15 countries participating in the evaluation of three Learning Stories: Mathematics in a Multicultural Setting (groups explain mathematical concepts in their own language via a wiki and link with other groups undertaking similar explanations in different languages), Embedding Exam Preparation in learning activities (using a range of digital tools to build up a bank of revision resources), Students Creating (Science) Resources (creating resources for younger students to teacher difficult curriculum concepts).

As in Cycle 1, teachers were very positive. Teachers in eight countries (AT, EE, HU, IS, IT, LT, NO, UK) were confident that Students Creating (Science) Resources would lead to innovation in the classroom. Teachers in three countries (HU, SK, TR) were confident that Embedding Exam Preparation in learning activities would lead to innovation in the classroom. Other benefits included new pedagogical strategies (collaboration, group work, new assessment approaches), enhanced student autonomy, increased student motivation, peer learning and support, and an improvement in learning outcomes (subject knowledge, ICT skills).

The three most important enablers were student motivation, ICT infrastructure and teacher motivation. Others included the support of colleagues, communication and collaboration tools, iTEC resources (Learning Story documentation, TeamUp) and the support of the National Pedagogical Coordinator, school ethos/culture and parental support. Challenges included: insufficient time for planning and implementation, insufficient ICT access, unreliable Internet access and restrictions, site registration issues, a lack of teacher ICT skills, and organising groups.

As identified within Cycle 1 and Cycle 2 evaluations and summarised below, there is evidence that two Learning Stories warrant further investigation. Outdoor Study was the most popular Learning Story in Cycle 1 and warrants further investigation in Hungary, Lithuania and Portugal. Students Creating (science) Resources was the most popular Learning Story in Cycle 2 and warrants further investigation in Austria, Estonia, Hungary, Lithuania and Norway.

Analysis of Cycle 2 data is still ongoing. Once complete full comparisons with Cycle 1 findings will be undertaken. Some preliminary comparisons can be made at this stage however.

In terms of benefits, teachers felt that increased student motivation was an important benefit in both cycles. Of course, this could be attributed to the Hawthorne effect. Over the course of iTEC further analyses of data will be undertaken to explore the perceptions of teachers participating in more than one cycle to identify whether or not teacher attitudes to the impact on student motivation change over time. In both cycles teachers also expressed positive views about their experiences, suggested that implementation led to new pedagogical approaches, increased student autonomy and collaboration. In Cycle 1 engagement with experts and outdoor learning were identified. This is not surprising given that the LS focussed on these. One notable difference between cycles in benefits identified by teachers relates to new assessment approaches which emerged as a clear benefit in Cycle 2 whereas in Cycle 1 it did not, despite peer feedback being one of the Learning Activities put forward. One possible reason is that as iTEC procedures and resources have been



developed teachers have more time to explore the resources and ideas fully. Other benefits which were common to both cycles included: increased teacher motivation and a positive impact on learner outcomes.

The enablers and barriers/challenges are similar across cycles (as well as being commonly cited in research literature). This partly relates to similarities in pedagogical approaches between Cycle 1 and Cycle 2 but also relates to more general issues with increasing the use of ICT to support teaching and learning in classrooms.

Finally, the Knowledge Map produced in the first year of the project has been made available via the iTEC website as an interactive map in order to improve accessibility. Information about national curricula, ICT usage, digital learning resources and innovative practice can be accessed via a tradition menu or a map of Europe. This is still in development with plans to include links to national networks of researchers and practitioners, short case studies, exemplary iTEC teacher-authored multimedia stories and practitioner research reports.

The implications for other work packages are presented. For WP2 (scenario development) and WP3 (Learning Story and Learning Activity development), resources provided to date have been well-received and are perceived to be innovative whilst being flexible enough to meet local needs. Teachers would still like ideas for implementing in a single lesson and more choice; however, both of these would pose challenges for evaluation. TeamUp is still not reliable; this may be acting as a deterrent to its uptake. It may be beneficial to provide guidance for teachers on some of the specific Learning Activities (challenges and how to overcome them).

For WP4, further development of the Teacher Community is required for Cycle 3 (and indeed this has already been undertaken). It would be beneficial for WP4 and NPCs to encourage teachers with a broader range of experiences and ICT competency in future cycles. NPC resources to support teachers during pilots could be useful for scaling-up and could be disseminated more widely. It would be beneficial to increase the number of teachers piloting in a single country to a minimum of 20 per cycle.

For WP11, as well as recommending that the Outdoor Study project and Students Creating (Science) Resources be investigated further in some countries, it is suggested that mandatory national training and support programmes (including online communities of practice) would be required to facilitate up-scaling and mainstreaming. It is also imperative that infrastructure is developed further and Bring Your Own Devices considered at national level in relation to current policies. It would also be beneficial to release teachers from teaching duties on a regular basis to facilitate professional development.

Lessons learned for WP5 include strengthening support for NPCs to undertake a research role, simplifying the survey administration process for teachers and NPCs, and revising the analytical approach for data analysis to account for small sample sizes when considering country and Learning Story that was piloted.

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## 1. INTRODUCTION

Work Package 5 (WP5) is concerned with the evaluation of the large-scale piloting of selected scenarios for the future classroom developed in iTEC in 1000+ classrooms. WP5 submitted two deliverables in the first year of the project. D5.1a is the Evaluation Plan which presents the approach undertaken when evaluating each of the 5 cycles of validation in the iTEC project. WP5 is not concerned with the evaluation of the project per se but of the piloting of iTEC resources and technologies in the classroom. D5.1a outlines the evaluation objectives and evaluation questions, the underlying methodology, the data collection methods and workflow, and the approach to data analysis including criteria for success and standards by which they will be judged (Task 5.2). It was first submitted in M6 and subsequently revised and resubmitted in M16 addressing recommendations made by reviewers following the first periodic review.

The first Evaluation Interim Report, D5.2, covered the period M1 to M12. It describes all activities undertaken prior to the first large-scale piloting of the Cycle 1 scenarios (which began in September 2011, the second year of the project). The evaluation preparatory activities undertaken in this first year included the Evaluation Plan (D5.1, described above), the Cycle 1 Evaluation Handbook for the National Pedagogical Coordinators (NPCs) and a Knowledge Map (Task 5.1). The Cycle 1 Evaluation Handbook (Task 5.3) is referred to in this report and is accessible online (URL), describing the protocols and procedures to be followed and presenting the research instruments. It was the key document for supporting NPCs' evaluation activities during Cycle 1 pilots and contributed to ensuring that a consistent approach to data collection was applied. The Knowledge Map provides a base-line context in the use of learning technologies and innovative practices that currently exist in the participating countries. It has been developed further during the second year of the project, described below.

This second Evaluation Interim Report (D5.3) provides a synthesis of work undertaken in the period M13 to M24. The primary activities undertaken relate to Task 5.4 Evaluation of Cycle 1 (M13 to M18) and Evaluation of Cycle 2 (M18 to M23). These tasks involved the collection, analysis and reporting of evaluation data from the pilots. There are no ethical issues in relation to this deliverable. Detailed guidance on ethical issues for data collection is included in the Evaluation Handbook. There are no IPR issues related to this document.

The report comprises seven sections and an annex. Firstly, it summarises how the recommendations of the first period review were addressed. Then it presents the **final results of the evaluation of Cycle 1** and the **interim results of the evaluation of Cycle 2**. In addition the report describes the development of an interactive knowledge map, based on the Knowledge Map produced in the first year of the project, and a community of TEL practitioners and researchers. Finally, implications of findings to date for other work packages and future cycles are outlined.

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WP5's 21 partners are: EUN (WP1 leader, WP4 leader, WP11 leader), FPCE (involved in WP4), DGIDC (MoE, Portugal), BMUKK (MoE, Austria), ITC (MoE, Lithuania), MONE (MoE, Turkey), AALTO (WP3 leader), ANSAS (previously INDIRE, MoE, Italy), TLF (MoE, Estonia), NCIE (MoE, Norway), UB (WP8 leader), K.U.LEUVEN (WP9 leader), UVIGO (MoE, WP10 leader), KM (WP7 leader), FULAB (WP2 leader), MMU (WP5 leader), MAKASH (MoE, Israel), ELFA (MoE, Slovakia), CNDP (MoE, France), EDUC (MoE, Hungary) and EDUB (MoE, Belgium) (see <http://itec.eun.org/web/guest/partners> for further details).

Partners contributed in the following ways:

- EUN and KULEUVEN provided support and feedback on the revision of Deliverable 5.1 (The Evaluation Plan) following feedback from the project review process in September 2011. In addition, the SC (EUN, FULAB, AALTO, KM, UB, KULEUVEN and UVIGO) discussed the revised evaluation objectives in December 2011.
- The revised Evaluation Plan was subsequently circulated to all partners on 7<sup>th</sup> February 2012 for comments in relation to preparation for Cycle 2.
- AALTO took full responsibility for evaluation of pre-pilots (reported in WP3 deliverables)
- MMU and EUN developed the questionnaires for Cycle 1; MMU, EUN, AALTO, FPCE, KM and UVIGO revised the questionnaires for Cycle 2.
- DGIDC, CNDP and EDUC piloted the Teacher Questionnaire with three teachers from each country in October 2011.
- MMU created the final versions of the questionnaires in SurveyMonkey in Cycle 1 and Cycle 2.
- MMU, EUN and FPCE developed the multimedia story guidance and provided online support within the Teacher Community in both cycles.
- DGIDC, BMUKK, ITC, MONE, ANSAS, TLF, NCIE, MAKASH, ELFA, CNDP, EDUC and EDUB
  - Translated two questionnaires for Cycle 1 and translated amendments for Cycle 2
  - Collected evaluation data including three cases studies per cycle (two provided as a case study report, one set of data translated and transcribed) (one partner did not provide any case study data, two partners did not provide teacher-authored multimedia stories)
  - Provided feedback on ID 5.3
- EUN and MMU conducted triangulation visits to Italy, Turkey and Spain in Cycle 1, and to Germany and France in Cycle 2

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- MMU conducted end of Cycle 1 interviews with all NPCs in December 2011 and January 2012.
  - MMU provided support to NPCs to undertake evaluation including providing an Evaluation Handbook in each cycle, running a briefing session for Cycle 2 on March 23<sup>rd</sup> 2012 (the briefing session for Cycle 1 was run in June 2011), updating on questionnaire responses, and providing individual support through email and telephone contact as required.
  - MMU analysed Cycle 1 data and undertook preliminary analysis of Cycle 2 data.
  - MMU produced ID5.3 and ID5.4. ID5.3 was circulated to all partners on 16<sup>th</sup> April 2012. Feedback was received from four partners.
  - Results from ID5.3 were presented by MMU at a project 'headlines' meeting for members of the project Steering Committee in February 2012, the General Assembly in March 2012, an iTEC webinar in April 2012, the Higher Level Group meeting in May 2012, two invited seminars in the UK in May 2012, and an international conference held in the UK in July 2012.

This document refers to key internal deliverables which are accessible via <http://itec.eun.org/web/guest/deliverables>. They are:

- ID5.3 Internal Report One: Report on the First iTEC cycle  
This presents the evaluation findings from Cycle 1 in relation to the evaluation questions
- ID5.4 Internal Report Two: Report on the Second iTEC cycle  
This presents the evaluation findings from Cycle 2 in relation to the evaluation questions
- Evaluation Handbook, Cycle 1  
This document outlines the procedures, protocols and data collection instruments for NPCs in Cycle 1
- Evaluation Handbook, Cycle 2  
This document outlines the procedures, protocols and data collection instruments for NPCs in Cycle 1

National Pedagogical Co-ordinators (NPCs) collected evaluation data in Cycle 1 and Cycle 2. They:

- Oversaw local administration of two online surveys:

- 
- About You and Your School (on current uses of ICT in the classroom and recent training experience)
  - Teacher Questionnaire (on the experience of piloting the chosen Learning Story)
  - Conducted three case studies per cycle involving:
    - Lesson observation
    - An interview with classroom teacher
    - A group interview with 6-8 students
    - An interview with head teacher
    - An interview with ICT co-ordinator (if applicable)
    - Teacher-authored multimedia stories of the experience (iTEC multimedia story – iMmS)
  - Ensured that teachers produced a multimedia story, documenting their experience through a blog or presentation.

NPCs produced a short case study report for two of the three case studies and arranged for transcription and translation of all data from the third case study. In Cycle 1 NPCs were interviewed and in Cycle 2 (following a review of procedures) NPCs completed a questionnaire about their role in the piloting process.

During each cycle triangulation visits were undertaken. The purposes of a Triangulation Visit (TV) are to:

- Observe the National Pedagogical Co-ordinator's (or their appointed colleague's) case study data collection procedures;
- Ensure understanding of and adherence to the case study data collection protocols as described in the Cycle Evaluation Handbook;
- Strive for consistency of data collection procedures across the iTEC countries.

In Cycle 1, the TV also included face-to-face interviews with the NPC. In Cycle 2 the NPC interview was replaced by a short questionnaire with follow-up interviews if necessary. Comprehensive guidance was produced for each Cycle for the member of Work Package 5 undertaking the visit to ensure a consistent approach (see Appendices 8.4 - 8.7).

During the iTEC project, each country receives one 2-day Triangulation Visit by a member of the WP5 evaluation team. Where possible, the Triangulation Visit is undertaken by a WP5 colleague who speaks the language of the country being visited. However, where this is not possible, the lesson being observed and the other data collection activities are conducted in English, or the WP5 colleague is accompanied by an interpreter. Each cycle starts with the development of

educational scenarios by Work Package 2 (see D2.2). Work Package 3 then follows a participatory design process to create Learning Stories, narrative overviews of learning developed from the more abstract educational scenarios. A Learning Story may include several Learning Activities and shows how they might work together. The Learning Activity, a concrete description of a learning sequence, can be supported, either partially or completely, by a set of provided technological tools. Resources developed by Work Package 3 are localised by NPCs and disseminated to teachers participating in the piloting process.

In Cycle 1, two Learning Stories (LS) were piloted:

- The **Outdoor Study** project requires teams of learners to collect data (scientific, multimedia) outside the classroom.
- The **Bring in the Expert** project requires teams of learners to collaborate with outside experts via communication technologies.

Each was underpinned by 4 core Learning Activities (LAs): teamwork, recording team newsflashes, peer feedback and mental notes about learners.

In Cycle 2, three Learning Stories were piloted:

- **Mathematics in a multicultural setting:** This scenario uses the language of mathematics to improve participation and communication in a multicultural setting. Groups explain mathematical concepts linking to online resources via a wiki using their own language and link to other group's explanations in native or other languages.
- **Embedding exam preparation in learning activities:** The scenario provides both teachers and students with useful and innovative ways of using technology to build a bank of resources that can be used for ongoing learning and revision. Students create resources for homework such as podcasts, puzzles, questionnaires, notes in wikis. Students also arrange ad-hoc collaborative sessions with other students nationally and internationally.
- **Students creating (science) resources:** Students support one another to learn difficult concepts in science or other subject areas. They create exhibits (for example, posters, podcasts, simulations) for younger students to teach a concept from the curriculum, with mixed-experience teams focussing on different concepts.

The Learning Stories were underpinned by two packages of Learning Activities developed in Work Package 3: package A focusing on learning in teams, and package B focusing on learning individually. The specific activities were: ad-hoc collaboration, learning oriented browsing, reflection, peer feedback, information grouping and prepare results.

Work Package 3 also designed and implemented 'TeamUp' as a technical prototype, together with a brief visual user manual to accompany it. This was the only iTEC technology (i.e. developed within the project) provided for Cycle 1 to use in the

implementation of the LS. This tool enables teachers to generate teams, either teacher-defined or randomly generated. Teachers and students can generate topics or themes and then the students can indicate their preference. Teachers can also identify other relevant characteristics such as gender. Teams can then be formed based on the team size required, and whether or not students should be matched to their chosen topic or assigned to groups based on certain characteristics. TeamUp also offers the facility for teams to record 60 second newsflashes about their progress.

ID5.3 (internal deliverable) The Evaluation of Cycle 1 was due for completion in M18. However, four countries did not complete the first cycle of piloting until January 2012 (planned completion was December 2011) and the evaluation data were not received from all countries by the deadline of January 31<sup>st</sup> 2012 (extended from January 17<sup>th</sup> 2012). The surveys for five of the 17 countries were kept open until February 5<sup>th</sup>. These delays were understandable given that this was the first cycle but also partly attributable to difficulties the teachers experienced when trying to register for the Teacher Community (through which the surveys were administered). In addition, the requirement to resubmit D5.1 delayed some of the preparatory activities in relation to the evaluation of Cycle 1. As a result, the internal deliverable was not circulated to all iTEC partners until 16<sup>th</sup> April 2012. Following feedback from iTEC partners, it was finalized by the end of Year 2.

ID5.4 (internal deliverable) The Evaluation of Cycle 2 was due for completion in M23. However, the surveys were not closed until July 7<sup>th</sup> (July 19<sup>th</sup> in some cases following individual requests from NPCs). With annual leave over the summer and staff illness, it was not possible to analyse the data fully at the time of writing this report. Therefore, interim findings are presented and work will continue on the analysis and report writing until mid-October 2012.

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## 2. THE RESUBMISSION OF D5.3

Recommendation 5 from the first periodic review was:

5. It is recommended that the objectives of the evaluation be focussed and clearly stated, distinguishing them from the objectives of Work Package 5.

The Evaluation Plan was reviewed following the comments provided after the first periodic review. A small working group was established consisting of EUN and MMU staff. In addition, discussions within the Innovation sub-group established as a result of the first periodic review also contributed to the re-focussing of the evaluation objectives. As a result, it was agreed that the evaluation should focus on benefits rather than change, together with enablers and barriers/challenges. Three objectives for the evaluation were presented:

1. To identify the benefits and shortcomings of each iTEC 'learning story' in relation to learning and teaching, and opportunities for further development and subsequent scalability.
2. To identify the specific benefits and shortcomings of iTEC technologies.
3. To identify the benefits and shortcomings of the piloting process.

In consultation with the Steering Committee, five evaluation questions were constructed:

1. To what extent does each iTEC Learning Story and relevant iTEC technologies benefit learning and teaching (for teachers, for learners, for others)?
2. To what extent is each iTEC Learning Story and relevant iTEC technologies sustainable, transferable and scalable?
3. What are the enablers of and barriers to adoption of each iTEC Learning Story (including appropriate iTEC technologies)?
4. To what extent is each Learning Story and relevant iTEC technologies fit for purpose? (usability; connection to current practice; what works and what doesn't work)?
5. What are the benefits and shortcomings of the piloting process (including the development of technical and pedagogical knowledge and skills)?

Additional revisions to the Evaluation Plan included:



- More detail explaining the focus of each research instrument.
- A matrix identifying how each of the research instruments would provide evidence to assess each of the evaluation questions.
- The strengthening of the rationale for a mixed-methods approach.
- Changing the requirements for NPCs to provide raw data for one case study in Cycle 3 to Cycle 5, to Cycle 1 to Cycle 5.
- Revising the evaluation criteria.

As the Cycle 1 evaluation was already underway the data collection instruments that were developed in the first year of the project were used. However, the evaluation questions and shift in approach outlined in the resubmitted deliverable informed the data analysis for Cycle 1 and also the presentation of the findings. Subsequently the research instruments were updated for Cycle 2 to reflect the refocusing of the evaluation.

D5.3 was resubmitted in December 2011.

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## 3. THE EVALUATION OF CYCLE 1

Cycle 1 was undertaken between September 2011 and December 2011, although teachers in four of the countries did not complete the piloting until January 2012.

As described above, the two Learning Stories which were piloted were:

- Outdoor Study (OS)
- Bring in the Expert (BE)

In addition, in Lithuania some teachers piloted one of the original scenarios put forward by Work Package 2 – Online Repositories Rock, drawing on the same set of underlying Learning Activities.

17 countries participated in Cycle 1, although in many countries with only small groups of teachers. They were advised to start engaging with the project on a small scale to establish appropriate procedures and support structures. Due to concerns raised by NPCs that it would be challenging to engage sufficient numbers of teachers to meet cycle targets, the pilot protocol developed by Work Package 4 (D4.2) specifies that teachers may pilot with more than one cohort of learners providing that a separate survey response is completed for each. Overall, NPCs reported that 341 pilots were implemented (although not all teachers provided the required evaluation data). 13 countries participated in pilot case study data collection.

Respondents were mainly experienced and ICT competent teachers, more than half of them also involved in other initiatives, indicating their positive attitude towards development of their practice. The majority of these teachers already used a range of technologies regularly (at least weekly) including office productivity tools, browsers and search engines, data management tools, and communication/collaboration tools. Furthermore, data from the NPC interviews confirms that in many cases teachers were known to be competent users of ICT and innovators. Many NPCs indicated that this choice was deliberate to maximise the chances of success in the first cycle, but it did result in a skewed set of teachers.

OS was the most popular Learning Story. Seven NPCs chose a single LS to present to teachers. Of these, six NPCs chose OS giving reasons such as: fit to the curriculum and practice, scope for variety and adaptability, and because prior experience of the LS had been gained through pre-piloting. Two NPCs felt that organising access to an expert (required in the second LS) would be time-consuming and therefore not practical in the short timescale for piloting. Only one country offered just BE, partly because it was the only aspect which was innovative for the two (experienced) teachers involved. Ten NPCs offered both to the teachers and allowed them to choose whichever one they preferred. In some cases, teachers reported that they had combined both LS components together.

### 3.1. Supporting National Pedagogical Co-ordinators (NPCs)

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Although they are education experts, NPCs are not professional researchers and support for the data collection element of their role has been provided by Work Package 5. NPCs were provided with the WP5 Evaluation Handbook C1 ([http://itec.eun.org/c/document\\_library/get\\_file?uuid=8fb9824f-5da4-4f87-af86-f10eea5e0690&groupId=10136](http://itec.eun.org/c/document_library/get_file?uuid=8fb9824f-5da4-4f87-af86-f10eea5e0690&groupId=10136)) and a two-hour briefing session on June 14<sup>th</sup> 2011. The session was run online via Flashmeeting and recorded for those NPCs who were unable to attend. A number of issues (mainly concerned with clarification) were raised during the meeting which led to revisions to the first version of the Evaluation Handbook. Following the event, an email was sent to all NPCs with the link to the recording of the meeting. Those who were unable to attend were also sent an email encouraging them to view the recording.

The Evaluation Handbook provides an overview of the evaluation including the evaluation objectives, and detailed descriptions of the research instruments and protocols. It was developed initially in the first year of the project and subsequently updated. NPCs were provided with updated versions of the Evaluation Handbook following internal feedback and changes to the evaluation approach as a result of the project review in September 2011. NPCs were positive about the level of detail provided in the Evaluation Handbook.

NPCs also sought help and guidance in relation to evaluation procedures on an individual basis either through email, telephone, a forum in the Teacher Community or in face-to-face settings such as the General Assembly.

### **3.2. Data collected and analytical approach**

As described above, quantitative and qualitative data were collected to support the evaluation of Cycle 1. The Associate Partners (from the Czech Republic and Finland) were not obliged to undertake case studies and in Cycle 1 chose not to do so. The industry partners (SMART and Promethean) were also not obliged to undertake case studies. SMART chose to undertake case studies in one of the two participating countries. Promethean provided one case study report, no raw data, and a combined multimedia story representing the combined views of the three participating teachers from two schools.

In total, 278 survey responses were received from 231 teachers (34 teachers piloted with two cohorts, four teachers piloted with three cohorts and four teachers piloted with four cohorts<sup>2</sup>). Survey responses were received for 198 cohorts undertaking The Outdoor Study project (OS), 26 cohorts undertaking Bring in the Expert (BE); and 36 cohorts undertaking a combination of the two Learning Stories. This information is unknown for 19 cohorts<sup>3</sup>.

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<sup>2</sup> This was capped at a maximum of 3 cohorts per teacher in Cycle 2 and 2 cohorts per teacher in Cycle 3.

<sup>3</sup> The process for identifying which Learning Story was piloted by a teacher was changed in Cycle 2 to ensure that this information was available for all participating teachers.

**Table 1: Overview of data collected in Cycle 1**

Country	No. pilots	No. survey responses	No. teachers	No. case study reports	Raw data	No. iMmS <sup>4</sup>	NPC interview
Austria	20	9	9	3	3	0	Yes
Belgium	10	7	6	0	0	0	Yes
Czech Republic	4	4	2	N/A	N/A	N/A	Yes
Estonia	21	21	15	2	1	3	Yes
Finland	19	14	14	N/A	N/A	N/A	Yes
France	10	7	7	2	1	3	Yes
Germany (SMART)	11	11	7	N/A	N/A	N/A	Yes
Hungary	47	47	45	2	1	4	Yes
Israel	8	5	2	2	2 <sup>5</sup>	3	Yes
Italy	12	8	7	2	1	3	Yes
Lithuania	84	84	67	2	1	0	Yes
Norway	12	6	4	2	1	2	Yes
Portugal	13	11	11	3	1	3	Yes
Slovakia	14	10	5	3	1	2	Yes
Spain (SMART)	10	8	7	2	1	2	Yes
Turkey	42	23	20	3	3	3	Yes
UK (Promethean)	4	3	3	1	0	2 <sup>6</sup>	Yes

<sup>4</sup> 21 in English, 8 in home language, 1 in home language with English summary

<sup>5</sup> Some raw data were received for two case studies; however the sets were incomplete

<sup>6</sup> The iMmS from UK are presented in a single document summarising the evaluation notes from 3 teachers piloting across four classrooms

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Totals	341	278	231	29	15	30	17
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Both qualitative data and iTEC Multimedia Stories (iMmS) varied considerably in terms of levels of detail and the richness of the data. Due to time constraints the iMmS in Cycle 1 have not yet been fully analysed; instead, 2-3 exemplary blogs were identified and summarised in the Cycle 1 evaluation report. The iMmS will be analysed further in the Autumn (2012).

In relation to the quantitative data, due to the difficulties that teachers faced registering for the Teacher Community not all teachers provided information about the classrooms in which they piloted the Learning Stories (subject area, age range, size of cohort). In addition, in a number of cases it was not clear which Learning Story a teacher had piloted. As far as possible cross-checks were undertaken (drawing on data from the Teacher Community and information provided by the NPC). In some cases teachers combined elements from both Learning Stories and very few implemented all the Learning Activities.

Qualitative data were coded using a framework derived from combining Kozma's conceptual framework for the SITES-M2 study<sup>7</sup>, student-centred pedagogical practices, enablers including a range of digital tools, usability, sustainability/transferability/scalability and the piloting process (including support, benefits and shortcomings). A thematic report was produced under the headings of benefits, enablers, challenges and the piloting process.

Quantitative data were firstly analysed by aggregating the data from all countries and reporting the descriptive statistics. Open ended responses were translated (using Google translate) and coded according to the framework applied to qualitative data. Following concerns raised in relation to the variation in sample sizes by country a simple weighting algorithm was applied. More sophisticated weighting approaches were considered but not applied given that the small numbers involved affects the reliability of weighted data and also that there were no requirements to generalise the findings to the general population. However, as many of the sample sizes (by country) are small this is not ideal although it did result in the outcomes being a little more conservative. The analytical approach was reviewed and revised for Cycle 2 to address this issue (see 7.3 below).

### 3.3. Findings

Whilst Work Package 3 provided guidance on the Learning Stories and Learning Activities, the variation in terms of implementation was substantial. NPCs localised the resources, in some cases changing aspects of the Learning Stories to fit with national requirements. Individual teachers selected resources and ideas, adapting

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<sup>7</sup> Kozma, R.B. (Ed.) (2003) Technology, innovation and educational change: A global perspective. Eugene, OR: International Association for Technology in Education.

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them further as necessary, to meet their needs. Nevertheless important results emerged in relation to the five evaluation questions defined in the Evaluation Plan (D5.1a)<sup>8</sup>:

1. Benefits for teaching and learning
2. Sustainability, transferability and scalability
3. Enablers and barriers
4. Fitness for purpose
5. The piloting process

The full analysis and data are presented in the Cycle 1 Evaluation report [http://itec.eun.org/c/document\\_library/get\\_file?uuid=8fb9824f-5da4-4f87-af86-f10eea5e0690&groupId=10136](http://itec.eun.org/c/document_library/get_file?uuid=8fb9824f-5da4-4f87-af86-f10eea5e0690&groupId=10136)). The main findings in relation to each evaluation question are summarised below.

### 1. To what extent does each iTEC Learning Story and relevant iTEC technologies benefit learning and teaching (for teachers, for learners, for others)?

- **The majority of teachers in seven countries were confident that OS has potential to lead to innovation in the classroom** (BE, FR, HU, IT, LT, PT, SK). (Countries with fewer than five teachers piloting OS were not included in this analysis).
- **The majority of teachers in three countries were confident that BE has potential to lead to innovation in the classroom** (AT, FI, HU). (Countries with fewer than five teachers piloting Bring in the Expert were not included in this analysis).
- **iTEC teachers were very positive** about the experience and enjoyed the **opportunity to experiment and take risks**, enhancing teacher creativity.
- Implementation led to the adoption of **new pedagogical strategies** for the teachers involved in piloting particularly in relation to:
  - collaboration and teamwork;
  - engagement with experts;
  - outdoor learning.

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<sup>8</sup> D5.1a is the revised Evaluation Plan, submitted in M16 addressing recommendations made by reviewers following the first periodic review

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- Students enjoyed **more autonomy and responsibility, peer-support and peer-learning**.
  - Participation had a **positive impact on teachers' use and understanding of digital tools** (which was surprising given that they were generally experienced and innovative teachers).
  - There was an **increased use of digital tools** to support students engaging in data capture, communication and collaboration. Students from seven of the 12 countries providing raw data (Estonia, Hungary, Israel, Italy, Portugal, Spain, Norway) felt their use of technology involved new digital tools and/or ICT use had increased.
  - **Teachers' and students' attitudes became more positive**. They found the implementation fun and interesting.
  - Teachers reported that **the LSs have the potential to impact positively on attainment but also on other outcomes** such as the quality of learning, and skills such as reasoning and questioning, as well as making teaching and learning more efficient. Students from six of the 12 countries providing raw data (Austria, Hungary, Lithuania, Slovakia, Spain, Turkey) felt that the learning approaches introduced were more effective.

## 2. To what extent is each iTEC Learning Story and iTEC technologies sustainable, transferable and scalable?

- **The majority of teachers in four countries were confident that they would implement OS again** (HU, LT, PT, SK). (Countries with fewer than five teachers piloting OS were not included in this analysis).
- **The majority of teachers in two countries were confident that they would implement BE again** (AT, HU). (Countries with fewer than five teachers piloting BE were not included in this analysis).
- **The majority of teachers in five countries who implemented OS were confident that they would recommend the Learning Story to other teachers** (DE, HU, IT, LT, PT). (Countries with fewer than five teachers piloting OS were not included in this analysis).
- **The majority of teachers in three countries who implemented BE were confident that they would recommend the Learning Story to other teachers** (AT, FI, HU). (Countries with fewer than five teachers piloting BE were not included in this analysis).
- **Data relating to scalability is limited** but (unsurprisingly) training, technical support (preferably in school) and ICT infrastructure are considered to be essential; further consideration should be given to the best ways to gather evidence in relation to this in future cycles in conjunction with Work Package 11 (responsible for mainstreaming successful iTEC scenarios).

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- It could be argued that the **Outdoor Study Learning Story would have the widest appeal to teachers across Europe**, as most teachers chose it. OS was most positively received, warranting further consideration in relation to scaling up and mainstreaming, in: Hungary, Lithuania and Portugal.

### 3. What are the enablers of and barriers to adoption of each iTEC Learning Story (including appropriate iTEC technologies)?

#### Enablers

- **Experienced and enthusiastic teachers.** Teachers' confidence in ICT and levels of ICT skills meant that they required little support. (This of course has implications for scaling up and mainstreaming.)
- **Collaboration between teachers** and opportunities to support each other face-to-face as well as through online communities. Two teachers (one from Estonia and one from Turkey) indicated that networking with teachers beyond their own school had been particularly helpful.
- **The TeamUp widget**, particularly the group allocation facility and the student feedback function (newsflashes).
- **Short exemplar Learning Stories (LS)** provided by Work Package 3 as part of the resources for Cycle 1.
- **Flexibility of LSs and fit to curricula, policies and practices.** Both LSs were perceived to be easy to adapt to meet local needs.
- **Intuitive technologies** such as iPads which were perceived to be easy for (less experienced) teachers to use.
- **Collaboration and communication tools** such as Skype, email, online forums, social media. Skype and email were particularly important in relation to Bring in the Expert. Online forums and social media were important in relation to co-ordinating the pilots.
- **Training and support** was an important enabler, particularly face-to-face workshops which 10 of the 17 NPCs specifically noted. Local online communities (as opposed to the central Teacher Community) were also identified as enabling the co-ordination and support of the pilots. In Austria, England, Estonia, and Hungary, video tutorials, on how to use the iTEC technologies for example, were identified as particularly useful.
- In two countries (Estonia and Hungary), **students having ICT skills** was seen to be an enabler.
- **Engagement outside school.** In relation to Bring in the Expert, engaging with experts was seen to be motivating for students, particularly if the expert is a good communicator. Securing parental engagement was also an important



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enabler. Explaining the project aims and collaborating with parents was noted as being helpful in Turkey and Italy.

- **School ethos and culture** (as reported commonly in similar research). In particular, a supportive head teacher and a culture of valuing and encouraging innovation (through school policies and practices) were considered to be important.
- Unsurprisingly, well-resourced schools with **reliable ICT infrastructure**, good home access, one-to-one access (Turkey) and prior experience with technologies were seen to be enablers.

### Barriers, challenges and drawbacks

- iTEC Technologies
  - **The iTEC Teacher Community** was a major challenge for many teachers and acted as a barrier for some. Teachers had difficulties registering, finding information and navigating the site, uploading documents, registering the classes which would be participating in the pilot (a separate process), and accessing the evaluation surveys.
  - There were a number of issues in relation to **TeamUp**:
    - Technical issues including compatibility with browsers and recording both audio and video. Some schools did not have cameras or recording equipment which prevented them from using the Newsflash functions.
    - Security issues relating to TeamUp were noted in two countries in relation to storing students' personal details online.
    - Accessing TeamUp in English (rather than national language versions) was a challenge for some students.
- **Insufficient ICT infrastructure**, particularly noted in Estonia, Hungary, Norway and Slovakia. It includes lack of ICT equipment, broken equipment, lack of technical support, lack of internet access or unreliable access, limited access to ICT equipment (having to book ICT suites) and lack of one-to-one access for students.
- **Difference in ICT provision at school and at home**. Issues noted by teachers were that some students had no internet access at home, older software, or no gmail account (required for site registrations).
- **Other technical issues** such as compatibility between student smartphones and school computers, specific tools such as Google+, lack of teacher technical skills and appropriateness for younger age groups.
- **Insufficient time** to undertake projects (constrained by length of pilot). 75 teachers in the survey identified lack of time or timing issues as the main

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problem faced in the implementation. Information was received later than expected and after curriculum plans had been finalised for the year. Some teachers noted that they would normally run projects (such as those offered in Cycle 1) over a period longer than the four months allocated for the cycle.

- **Lack of support and training** (experienced by a minority). 34 teachers in the survey suggested that they had received no support from the NPC/NTC and 2 case study teachers also mentioned the lack of training/support (technical, face-to-face, supporting documentation, exemplars). Teachers who could not speak English also felt disadvantaged as they were aware that this prevented some access to peer support via the Teacher Community.
- **Lack of perceived innovation** from a minority of teachers, who perceived that there had been no changes to pedagogical strategies or use of technology. In the survey six teachers suggested that the LS offered no benefits. Ten individual teachers from five countries perceived that the LS did not have the potential to lead to innovation in the classroom. It is not surprising to receive these views given the number of participating in Cycle 1 and the bias towards innovative and experienced teachers.
- **Students adapting to unfamiliar pedagogical approaches**, particularly group work and collaboration. They experienced difficulties relating to organisation and management, division of tasks, and reaching shared consensus. Some students said that they prefer working on their own.
- **Parental concerns** relating to attitudes towards technology, out of school visits and interacting with experts. Parents were concerned that spending time using technology and the different pedagogical approach was not beneficial. In both countries where this emerged as a particular issue (Spain, Turkey), by the end of the project parents were pleased with the outcome and the opportunities that their children had enjoyed.
- **Policy issues** such as particular rules about taking students off site during school hours in some countries. In Norway, there are currently regulations regarding the use of mobile telephones. In France, the administration requirements in relation to seeking permissions from authorities, schools and parents took a lot of time.

#### 4. To what extent is each Learning Story and relevant iTEC technologies fit for purpose (usability; connection to current practice; what works and what doesn't work)?

- Generally **the Learning Story/Learning Activity resources were perceived to be fit for purpose**, only requiring translation in relation to localisation. However, in two countries (Belgium, UK) the documents were considered to be lengthy and unwieldy.
- **The Learning Stories and Learning Activities were sufficiently flexible** such that teachers could select aspects to suit their needs.

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- **The Teacher Community was not fit for purpose** (as described above). It was redeveloped for Cycle 2.
  - **TeamUp suffered from a number of usability/technical issues.** However, given that it was presented as a prototype and that teachers were positive about its potential, it should be developed further. Indeed, this happened and an updated version was presented in Cycle 2.

#### 5. What are the benefits and shortcomings of the piloting process (including the development of technical and pedagogical knowledge and skills)?

- **The iTEC Teacher Community was used by NPCs but there was little use by teachers** primarily due to problems with registration and navigating the site. However, teachers recognised the potential benefits of such provision.
- In many countries **local online communities were used effectively to facilitate piloting** but did not enable teachers to network internationally.
- **Localisation of resources involved selecting and presenting relevant material, which was translated into the local language.** Some NPCs felt that iTEC project documentation was overlong and unwieldy.
- **Face-to-face meetings were perceived to be beneficial** by both NPCs and teachers. Teachers in the case study interviews indicated that they enjoyed meeting other teachers and seeing examples of LS implementation in practice.
- **e-learning resources such as video tutorials were also well-received.** For example, in Estonia tutorials on how to use TeamUp were created and uploaded to YouTube.

### 3.4. Dissemination

Preliminary findings were presented at a 'headlines' meeting for iTEC project Steering Committee members on February 27th 2012. This meeting was run online through Flashmeeting for one hour. A 5-page briefing document was circulated prior to the meeting. The attendees made a number of comments which were considered (and addressed where possible) when producing the evaluation report.

The findings were then presented at the General Assembly on 19th March 2012. A number of interesting questions/issues were raised including:

1. How do teachers understand 'innovative'?
2. How reliable are the results when there is so much variation between countries (numbers participating, choice and interpretation of Learning Stories)?
3. What about other contributory factors (ie the Hawthorne effect)?

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#### 4. How convincing is the evidence for taking a Learning Story to scale?

With regards to question 1), an iTEC subgroup, led by Work Package 2, was established following the first project review in September 2011 to develop an iTEC definition of innovation. This was completed by April 2012 and the project definition was incorporated into the teacher questionnaire for Cycle 2:

*The iTEC definition of innovation is: potentially scalable learning activities that provide beneficial pedagogical and technological responses to educational challenges and opportunities.*

*Q 9.4a) I think that this Learning Story has the potential to lead to innovation in the classroom:*     Yes, definitely     Yes, probably     No

In relation to question 2), the analytical approach for Cycle 2 survey data was changed to a qualitative analysis on a country-by-country basis followed by a cross-case thematic analysis. This enables common themes and patterns to emerge, together with clearer comparisons and distinctions between countries, and is a more robust approach given the differences in sample sizes. This will partly address question 4 but this will also require further collaboration with Work Package 11, the Higher Level Group and Ministries of Education partners who should be engaged in systematic reviews of the evidence in relation the Learning Stories and Learning Activities emerging as likely candidates for mainstreaming.

With regards to question 3), additional factors such as the Hawthorne effect will be taken into account when analysing the data and interpreting the findings.

A webinar took place on April 25th which was attended by teachers and project partners.

On May 8th a presentation was given to the iTEC project High Level Group. Again, a number of interesting questions/issues were raised including:

5. What can be said about the impact on learning outcomes and student attainment? Could links be made to PISA/TIMMS data to explore this further?
6. What cross-national patterns exist in the data?

To date, it has not been possible to explore questions 5) and 6) fully. However, the change in analytical approach (in Cycle 2) will facilitate analysis for question 6) more readily. Furthermore, the periods outside the main cycle data collection and analysis (for example, October 2012 – December 2012 and April 2013 to May 2013) will be used to explore these issues further.

MMU were also invited to give seminars on May 16th 2012 at the Department of Education, University of Oxford and on May 22nd 2012 at the Graduate School of Education, University of Bristol.

A paper was also presented at the International Federation for Information Processing Technical Committee 3 conference, at Manchester Metropolitan University on July 3rd 2012. Papers will also be given at the forthcoming British

Educational Research Association conference in Manchester, UK on September 5th 2012 and at the European Conference on Educational Research in Cadiz, Spain on 18th September 2012.

As described above the results were reported in ID5.1 The Evaluation of Cycle 1 which was finalised by the end of Year 2, and made available for public dissemination via the iTEC website.

### 3.5. Triangulation visits

Towards the end of Cycle 1, Triangulation Visits were carried out in 3 countries:

**Table 2: Summary of Triangulation Visits in Cycle 1**

Country	Date of TV	TVisitor
Italy	5.12.11	WP5 colleague + interpreter
Turkey	29.12.11	WP5 colleague fluent in Turkish
Spain	24.1.12	WP5 colleague fluent in Spanish

All three NPCs adhered fully to the data collection protocols for observing the Case Study Teachers' lessons and collecting case study documentation. The two NPCs who visited schools with ICT co-ordinators also adhered fully to the data collection protocols but the time allowed for these interviews seemed to be insufficient.

In relation to data collection protocols for interviewing the Case Study Teacher, one NPC did not request permission to record the interview but may have arranged this beforehand as the teacher did not raise any objections.

In relation to the data collection protocols for interviewing students, one NPC did not ensure that all students present contributed to the conversation.

In relation to the data collection protocols for interviewing head teachers, two NPCs could have provided the head teacher with more information about iTEC.

As a result of this process, NPCs and Triangulation visitors briefing sessions took into account the following points:

1. NPCs need to remember:
  - to assure interviewees of confidentiality;
  - to seek permission for recording interviews at the beginning of the interview; re-ask even if this has been agreed beforehand;

- to thank all interviewees for the part they are playing in iTEC as well as for taking part in their interview;
  - to ensure that all interviewees have their full amount of interview time in order to allow them to provide full and detailed answers that reflect their own personal views/experiences;
  - to ensure that student groups for interviewing should preferably consist of 6 students and should not exceed 10.
2. Triangulation Visitors need to remember that:
- they may not be able to see certain documents that are required (eg: Parent Permission Letters), and it is acceptable to be given the word of a professional that the document/s do exist;
  - where a document is not seen by the TV visitor, they should ask the NPC about its existence/whereabouts, thus avoiding a recording of “partly” when an expectation has in fact been met.

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## 4. THE EVALUATION OF CYCLE 2

Cycle 2 was undertaken between March 2012 and June 2012.

As described above the three Learning Stories which were piloted were:

- Mathematics in a multicultural setting (MMS)
- Embedding exam preparation in learning activities (EEP)
- Students creating (science) resources (SCR)

These Learning Stories were underpinned by two packages of Learning Activities, one designed to support learning in teams and the other learning individually. 15 countries participated and 13 in pilot case study data collection. SCR was the most popular Learning Story with 212 cohorts (190 teachers) implementing it, followed by EEP implemented by 68 cohorts (56 teachers) and only 18 cohorts (15 teachers) undertaking MMS. Although SCR was derived from a scenario focusing on the subject area of science, in some case (Italy for example) the Learning Story was adapted to include other subject areas as the idea readily transfers across the curriculum. Therefore for the purpose of analysis and reporting 'science' is bracketed in the Learning Story title.

### 4.1. Supporting National Pedagogical Co-ordinators

Continuing from the support provided in Cycle 1, NPCs were provided with a revised and updated WP5 Evaluation Handbook C2 ([http://itec.eun.org/c/document\\_library/get\\_file?uuid=4dd2a438-249a-465b-b291-3b7246ecbec9&groupId=10136](http://itec.eun.org/c/document_library/get_file?uuid=4dd2a438-249a-465b-b291-3b7246ecbec9&groupId=10136)) for Cycle 2 and another 90 minute briefing session on March 23<sup>rd</sup> 2012. The session was run online via Flashmeeting and recorded for those NPCs who were unable to attend (it was subsequently revisited over 40 times). The briefing session focussed on areas of the Evaluation Handbook that had been revised following its use in Cycle 1 and aspects of data collection which needed strengthening. These aspects were identified through the triangulation visit process in Cycle 1, a review of the Cycle 1 case study reports and also of the Cycle 1 raw data, as well as findings and experiences from the Cycle 1 evaluation.

iMmS guidance was revised to simplify issues relating to publishing the iMmS in the Teacher Community and increase flexibility for teachers in relation to choice of presentational format. NPCs were alerted that there would be some requests for additional translations for the survey instruments. NPCs were informed that the end of cycle NPC interview had been replaced with a questionnaire (and follow-up brief interview of no more than 10 minutes if required) in order to minimise the burden on themselves and to simplify data collection and analysis. NPCs were informed about changes to the implementation of the surveys which were intended to simplify the administration process. NPCs were alerted to some small changes to the interview questions. NPCs were directed to the strengthened guidance on interviewing, particularly in relation to prompting deeper responses to initial questions. Finally,

NPCs were reminded of the importance of providing direct quotations to evidence claims made in Case study reports.

A number of issues (mainly concerned with clarification) were raised during the meeting. In particular, NPCs requested immediate notification when a teacher completed a survey so that they could pursue non-responders. However, the online survey tool and administration approach undertaken in Cycle 2 did not allow for this. Instead, NPCs were provided with a list of teachers who had completed surveys on request.

As described above, the Evaluation Handbook provides an overview of the evaluation including the evaluation objectives, and detailed descriptions of the research instruments and protocols.

NPCs also sought help and guidance with regards to the evaluation procedures on an individual basis either through email, telephone, a forum in the Teacher Community or in face-to-face settings such as the General Assembly.

## 4.2. Collecting and analysing the data

As described above, quantitative and qualitative data were collected to support the evaluation of Cycle 2. The Associate Partners (from the Czech Republic) were not obliged to undertake case studies and in Cycle 2 (as in Cycle 1) chose not to do so. The industry partners (SMART and Promethean) were also not obliged to undertake case studies. As in Cycle 1, SMART chose to undertake case studies in one of the two participating countries. Promethean provided two case studies and the accompanying raw data for each.

In total, 298 survey responses were received from 259 teachers (28 teachers piloted with two cohorts and four teachers piloted with three cohorts<sup>9</sup>). Survey responses were received for 212 cohorts who undertook Students Creating (Science) Resources (SCR), 68 cohorts who undertook Embedding Exam Preparation in Learning Activities (EEP) and 18 cohorts who undertook Mathematics in a Multicultural Setting.

**Table 3: Overview of data collected in Cycle 2**

Country	No. pilots	No. survey responses	No. teachers	No. case study reports	Raw data	No. iMmS	NPC questionnaire
Austria	23	18	11	2	3	3	Yes
Czech	4	4	2	N/A	N/A	N/A	Yes

<sup>9</sup> This was capped at a maximum of 3 cohorts per teacher in Cycle 2 and 2 cohorts per teacher in Cycle 3



Republic							
Estonia	30	26	22	2	1	3	Yes
France	25	14	14	2	1	2	Yes
Germany (SMART)	19	8	7	2	1	2 <sup>10</sup>	Yes
Hungary	50	39	35	2	1	3	Yes
Israel	16	8	5	2	2 <sup>11</sup>	3	Yes
Italy	41	41	41	3	1	3	Yes
Lithuania	67	45	45	2	1	0	Yes
Norway	15	10	7	2	1	2 <sup>12</sup>	Yes
Portugal	32	27	27	2	1	3	Yes
Slovakia	14	10	6	2	1	3	Yes
Spain (SMART)	18	17	15	N/A	N/A	N/A	Yes
Turkey	39	19	19	17	16	3 <sup>13</sup>	Yes
UK (Promethean)	28	12	5	2	1 <sup>14</sup>	2	Yes
Totals	421	298	262	42	31	32	15

Two more countries participated in Cycle 1, yet the total number of pilots increased in Cycle 2. This was as expected as it was suggested to NPCs that smaller numbers of teachers should be involved in the first cycle whilst the processes and support structures were being established. However, the number of survey responses

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<sup>10</sup> In addition, there are links to two blogs containing posts/comments from students

<sup>11</sup> Raw data provided for each of the two case study reports, thus only 2 case studies undertaken

<sup>12</sup> One of the multimedia stories was co-authored by 3 teachers

<sup>13</sup> 16 Turkish teachers produced multimedia stories but many only described the activities, with lots of photographs and students work, rather than including reflection. The three most reflective stories were selected for analysis.

<sup>14</sup> Raw data provided for one of the case study reports

received in Cycle 2 was not much higher in Cycle 2 than it was in Cycle 1. As described in Section 7.2 below, changes to survey administration will take place in Cycle 3 to address this issue. In Cycle 2 more case study reports and raw data were received than in Cycle 1 as Turkey increased the number of case study teachers involved due to interest and demand.

As in Cycle 1, the qualitative data and iTEC Multimedia Stories (iMmS) varied considerably in terms of levels of detail and the richness of the data. The iMmS from Cycle 1 and Cycle 2 will be screened those considered worthy of detailed analysis will be reviewed in November 2012.

In Cycle 2, data about the subject area, age range and size of cohort was provided by the NPC for each cohort via the Pilot Management Tool (overseen by Work Package 4). The Teacher Questionnaire in Cycle 2 required teachers to explicitly identify which Learning Story and which Learning Activities they included in the implementation.

As in Cycle 1, qualitative data were coded using a framework derived from combining Kozma's conceptual framework for the SITES-M2 study<sup>15</sup>, student-centred pedagogical strategies, enablers including a range of digital tools, usability, sustainability/transferability/scalability and the piloting process (including support, benefits and shortcomings). A thematic report will be produced under the headings of benefits, enablers, challenges and the piloting process.

As the analytical approach for quantitative data in Cycle 1 (aggregating survey responses across countries) had limitations (potential bias from larger samples in a small number of countries) it was decided that a qualitative approach would be more appropriate. Instead, the data from each country was analysed separately then subjected to a qualitative thematic meta-analysis to consider similarities and differences across countries. This has the additional benefit of generating country-specific findings which individual Ministries of Education and NPCs may find useful.

### **4.3. Interim findings**

As in Cycle 2, the variation in implementation was substantial. However, teachers commented on a range of benefits, enablers and challenges which were similar. At the time of writing D5.3 the data have not been fully analysed and therefore this section presents the interim findings. At this point in time the data relating to Fitness for Purpose and The piloting process have not yet been analysed. The interim findings focus on:

1. Benefits for teaching and learning
2. Sustainability, transferability and scalability

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<sup>15</sup> Kozma, R.B. (Ed.) (2003) Technology, innovation and educational change: A global perspective. Eugene, OR: International Association for Technology in Education.

### 3. Enablers and barriers

In common with Cycle 2, teachers who responded to the surveys and participated in the case studies were generally positive about their experience. The full analysis and data are presented in the Cycle 2 Evaluation report, which will be finalised by mid-October 2012. D5.3 only presents a summary of the emerging findings in relation to three of the evaluation questions.

#### 1. To what extent does each iTEC Learning Story and relevant iTEC technologies benefit learning and teaching (for teachers, for learners, for others)?

- As in Cycle 1, most teachers were very positive about their experience, reported **a wide range of benefits**.
- **The majority of teachers in eight countries were confident that SCR has potential to lead to innovation in the classroom** (AT, EE, HU, IS, IT, LT, NO, UK). (Countries with fewer than five teachers piloting SCR were not included in this analysis).
- **The majority of teachers in three countries were confident that EEP has the potential to lead to innovation in the classroom** (HU, SK, TR). (Countries with fewer than five teachers piloting EEP were not included in this analysis).
- As in Cycle 1, teachers perceived that a main benefit was **the introduction of new pedagogical strategies facilitated by the Learning Activities**. Teachers from all but one of the countries involved in piloting suggested that main benefits of participation included either new approaches to learning in their classrooms or changes to pedagogical strategies:
  - **new approaches to learning** (main benefit: AT, CZ, EE, ES, IS, IT, LT, PT; also noted by individual teachers in DE, FR, HU, NO, TR);
  - **collaboration and group work** (main benefit: AT, CZ, EE, ES, HU, IT, SK; also noted by individual teachers in FR, IS, LT, PT, TR);
  - **increased variety of pedagogical strategies** (main benefit: AT, NO; also noted by individual teachers in IT);
  - **increased use of ICT** (main benefit: NO; also noted by individual teachers in ES, PT, LT, TR);
  - **creating opportunities for learning that is individualised** (main benefit: SK; also noted by individual teachers in FR, IT, PT).
- **Enhanced student autonomy** was perceived to be a main benefit in six countries (main benefit: FR, IS, PT, SK, TR, UK; also noted by individual teachers in ES, HU, IT, LT).

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- **Increased student motivation** was one of the main benefits cited by teachers in 11 countries (main benefit: AT, CZ, EE, ES, FR, IS, IT, LT, PT, SK, TR; also mentioned by individual teachers in: HU, NO, TR). Interestingly student motivation was also perceived to be an enabler and lack of motivation was perceived to be a barrier.
  - Teachers from the UK suggested that **new assessment approaches** was a main benefit (also noted by individual teachers in ES, FR, IT, PT) whilst individual teachers from four countries felt that peer learning was beneficial (DE, HU, PT, LT). Students themselves also commented that they found **peer feedback and support** beneficial. These approaches were facilitated by the Learning Activity LA5 Peer Feedback and also through the Learning Stories which all involved aspects of peer teaching and learning.
  - Another main benefit noted by teachers from seven countries (main benefit: AT, DE, FR, HU, IT, TR, UK) was that **the resources were effective leading to improvements in learning outcomes** including attainment and subject knowledge, quality of work produced, ICT skills and 21<sup>st</sup> century skills. This was also noted by individual teachers in four countries (EE, IS, LT, PT).

## 2. To what extent is each iTEC Learning Story and iTEC technologies sustainable, transferable and scalable?

- **The majority of teachers in two countries were confident that they would implement Hungary and Turkey were confident that they would implement EEP again and that they would recommend EEP to other teachers** (HU, TR). (Countries with fewer than five teachers piloting EEP were not included in this analysis). **Further consideration should be given to scaling-up and mainstreaming this Learning Story in these two countries.**
- **The majority of teachers in six countries were confident that they would implement SCR again** (AT, EE, HU, IT, LT, NO). (Countries with fewer than five teachers piloting SCR were not included in this analysis).
- **The majority of teachers in seven countries were confident that they would recommend SCR other teachers** (AT, EE, HU, IS, LT, NO, UK). (Countries with fewer than five teachers piloting SCR were not included in this analysis).
- **MMS had a very low uptake suggesting it is not appropriate for mainstreaming at the current time.**
- It could be argued that **the Students Creating (science) Resources Learning Story will have the widest appeal to teachers across Europe** as most teachers chose it. Further consideration in relation to scaling-up and mainstreaming should be given in those countries in which the resources were most positively received: Austria, Estonia, Hungary, Lithuania and Norway.

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### 3. What are the enablers of and barriers/challenges to adoption of each iTEC Learning Story (including appropriate iTEC technologies)?

#### Enablers

- **The three most important enablers identified by teachers were:**
  - **Student motivation** (main enabler: AT, EE, ES, FR, IT, LT, PT, TR, UK; also mentioned by individual teachers in HU, IS, NO, SK).
  - **ICT (access and infrastructure)** (main enabler: CZ, FR, DE, HU, IS, SK, TR, UK; also mentioned by individual teachers in EE, ES, IT, PT, LT). **Technologies facilitating communication and collaboration were perceived to be particularly helpful** including social networking tools, blogs and wikis. Digital tools for media recording were also seen to be important.
  - **Teacher motivation** (main enabler: AT, DE, ES, IT, LT, PT, NO; also mentioned by individual teachers in EE, HU, TR).
- The **support of colleagues** in school and across the project was also perceived to be helpful (main enabler: IT, NO; also mentioned by individual teachers in EE, HU, IS, PT, SK). Local online communities facilitated sharing and communication between teachers within and across participating schools.
- Teachers from two countries suggested that **support from the NPC** had been a main enabler of the implementation (main enabler: SK, UK; also mentioned by individual teachers in ES, FR, IT, LT, NO). For example, a teacher from France suggested that the face-to-face workshop and follow-up call from the NPC was particularly helpful. **iTEC resources** were also noted as an enabler by individual teachers in eight countries (ES, HU, IT, IT, LT, NO, SK, TR). For example, a teacher in Hungary suggested that the design of the learning process, the Learning Story and Learning Activities, was an enabler. **Some teachers found TeamUp useful for forming groups and recording reflections.**
- **School ethos and culture**, including the support of the head teacher, was an important enabler (main enabler: ES; also mentioned by individual teachers in HU, IT, PT, NO, SK, TR).
- **Parental support** was noted by individual teachers to be an enabler in four countries (HU, IT, LT, NO). Parents were described as collaborating in the projects and also in one case contacting the school to comment on the enthusiasm of their child at home in relation to iTEC activities.

#### Barriers/challenges

- **Insufficient time** to prepare and undertake the work was referred to by all but four countries as a main challenge (CZ, DE, EE, ES, FR, HU, IS, IT, LT, PT, TR).

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- Almost half the 13 main challenges that teachers identified in the survey are technology related; infrastructure is still not sufficient in most countries. They include:
    - **insufficient ICT access** (AT, ES, HU, IT, LT, NO, TR, UK, also raised by individual teachers in EE, DE, PT);
    - **unreliable Internet access** (FR, HU, IT, NO, PT, also raised by individual teachers in LT, SK, TR);
    - **controlled Internet access** through filtering for example (NO, TR, also raised by individual teachers in LT, SK, TR);
    - **general software issues** and particularly site registrations (UK, also raised by individual teachers in ES, FR, HU, IT, LT, NO, SK, TR);
    - **lack of teacher ICT skills** (CZ, also raised by individual teachers in ES, HU, IT, LT, PT, TR, UK);
    - **management of learner response systems** (UK).
  - **It is notable that TeamUp is still not reliable** despite further development, although it is still presented as a prototype and not a finished product. It was raised as a main challenge in almost half of the participating countries (ES, HU, IS, IT, PT, SK, TR, also raised by individual teachers in EE, FR, LT). Examples of problems included difficulties editing student profiles and recording newflashes, and losing data (student profiles, groups).
  - **Timetabling and curriculum constraints**, as in Cycle 1, were also challenges for almost half the countries (AT, CZ, ES, HU, NO, SK, TR, also raised by a small number of teachers in the UK). In two countries (IT, PT) teachers mentioned that running the pilot at the end of the academic year was a challenge.
  - As in Cycle 1, **organising groups** was also a main challenge for teachers in five countries (CZ, ES, FR, HU, IT) and mentioned by a few teachers in a further six countries (AT, DE, LT, PT, SK, TR).

#### 4.4. Comparisons between Cycle 1 and Cycle 2

Analysis of Cycle 2 data is still ongoing. Once complete, comparisons with Cycle 1 findings will be undertaken. Some preliminary comparisons can be made at this stage however.

In terms of benefits, teachers felt that increased student motivation was an important benefit in both cycles. Of course, this could be attributed to the Hawthorne effect. Over the course of iTEC further analyses of data will be undertaken to explore the perceptions of teachers participating in more than one cycle to identify whether or not teacher attitudes to the impact on student motivation change over time. In both cycles teachers also expressed positive views about their experiences, suggested

that implementation led to new pedagogical approaches, increased student autonomy and collaboration. In Cycle 1 engagement with experts and outdoor learning were identified. This is not surprising given that the LS focussed on these. One notable difference between cycles in benefits identified by teachers relates to new assessment approaches which emerged as a clear benefit in Cycle 2 whereas in Cycle 1 it did not, despite peer feedback being one of the Learning Activities put forward. One possible reason is that as iTEC procedures and resources have been developed teachers have more time to explore the resources and ideas fully. Other benefits which were common to both cycles included: increased teacher motivation and a positive impact on learner outcomes.

The enablers and barriers/challenges are similar across cycles (as well as being commonly cited in research literature). This partly relates to similarities in pedagogical approaches between Cycle 1 and Cycle 2 but also relates to more general issues with increasing the use of ICT to support teaching and learning in classrooms.

#### 4.5. Dissemination

To date the headline findings from Cycle 2 have been presented at the General Assembly in Brussels in September 2012.

As with Cycle 1, the findings will be shared with the Steering Committee and Work Package 5 partners at the end of September. Once finalised the report (ID5.4 as described above) will be made available on the iTEC website. Conference papers and journal articles will be submitted in due course (during the third year of the project).

#### 4.6. Triangulation visits

Towards the end of Cycle 2, Triangulation Visits were carried out in 2 countries:

**Table 4: Summary of Triangulation Visits in Cycle 2**

Country	Date of TV	TVisitor
France	8.6.12	WP5 colleague fluent in French
Germany	5.6.12	WP5 colleague fluent in German

There were fewer issues arising in Cycle 2 as compared to Cycle 1 suggesting that the NPC training and TVisitor guidance/training addressed some of the weaknesses in the data collection and TVisit processes. The lack of full compliance is mainly associated with the thanks offered at the end of the interview when NPCs should

thank interviewees for the part they are playing in iTEC as well as offering general thanks.

1. NPCs need to remember:

- to thank all interviewees for **the part they are playing in iTEC** as well as for taking part in their interview

2. TVisitors need to remember that:

- In some situations NPCs may be able to move around the classroom during the lesson but that agreement should still be sought with the class teacher.
- That if the NPC does not thank interviewees for the part they are playing in iTEC as well as for taking part in their interview then they should record this as 'Partly' not 'Yes'.



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## 5. DEVELOPING AN INTERACTIVE KNOWLEDGE MAP AND A COMMUNITY OF RESEARCHERS

### 5.1. Sharing the Knowledge Map

As part of the work undertaken in the first year of iTEC a Knowledge was produced in order to:

- situate the evaluation of the iTEC project in general and national contexts;
- reveal progress in iTEC schools beyond national baselines/benchmarks;
- help to interpret the iTEC evaluation findings in terms of underlying national conditions (political, educational, and socio-economic);
- enable iTEC partners working with schools to make evidence-based decisions on pedagogical innovation.

Feedback received as a result of the first periodic review was very positive but it was suggested that the Knowledge Map be made more dynamic and more accessible. As a result the second section of the Knowledge Map presenting summaries of Innovative Classroom Practice with Digital Technologies on a country-by-country basis has been launched online via the iTEC website. The country reports were produced in collaboration with the NPC in each country and can be accessed either by clicking on a country presented within a map of Europe or via a traditional text menu listing the participating countries.

For each country it is possible to drill deeper into subsections of the Knowledge Map:

- Key Groups: outlining the organisations responsible for ICT in schools and key policies.
- The Current Curriculum Context for ICT:
- ICT Usage in the School
- Digital Learning Resources
- Other Issues
- Innovative Practice: the three criteria by which innovative practice might be judged, together with a description of innovative practitioners
- Key Sources: a list of references used to inform the country summary

In addition, the website also provides a link to the latest Insight Report on the country. Insight Reports are produced by European SchoolNet and provide in-depth descriptions of national developments in six core areas of eLearning: Trends in Education and ICT, ICT Policy, ICT Practice, Content and Services, Teacher

Education for ICT and Infrastructure. They are updated annually. NPCs will also be asked to review the content by December 2012 and December 2013 in order to update the Knowledge Map. Finally, there is an invitation for interested parties to submit suggestions for projects and articles that should be included in the Knowledge Map.

The above provides a review authoritative country-specific data.

Future developments under investigation include:

- information on research-active universities and similar establishments together with contact details for active researchers;
- a facility for practitioners to share their own research (conference papers, articles, action research);
- links to exemplar iTEC multimedia stories
- 2 page case study summaries of iTEC pilots which exemplify iTEC scenarios in action.

## **5.2. Liaison with the STELLAR and TEL-Map projects**

Initial contact was made with the FP7-funded STELLAR project at the Teacher Workshop organised by WP4 in iTEC. STELLAR was a Network of Excellence on Technology Enhanced Learning (TEL). One of the activities undertaken by STELLAR was to identify active practitioners and researchers in the field of TEL across Europe, supporting the development of a community of TEL researchers. The opportunity to link the two projects (STELLAR and iTEC) is being pursued in order to identify researchers and doctoral students with an interest in school-based ICT. Members of the STELLAR project who attended the iTEC Teacher workshop at BETT in January 2012 expressed an interest in the iTEC Knowledge Map which was subsequently shared with STELLAR. As a result a member of WP5 attended a STELLAR meeting on January 31st and February 1st in London. Liaison has continued since then in order to obtain information about active TEL researchers (members of STELLAR) in the iTEC countries. This activity is still ongoing although STELLAR finished in May 2012.

At the STELLAR meeting in London contact was established with the TEL-Map project. TEL-Map is an FP7-funded Coordination and Support Action designed to develop a collaborative road-mapping to support the development and dissemination of TEL knowledge and understanding, as well as supporting pedagogical changes across all educational sectors. The initiative runs until March 2013. The TEL-Map project team have similar interests to the Knowledge Map in relation to forming a road-mapping cluster for schools. One aim of TEL-Map is to identify innovative practices in schools. A member of WP5, representing the iTEC project, attended a meeting in Bologna on May 9th and 10th, the purpose of which was to engage stakeholders in a cluster focusing on producing a roadmap for the creative classroom in school settings. iTEC has also been listed on the TEL-Map Learning Frontiers

portal (<http://www.learningfrontiers.eu/>). WP5 is actively working with members of the TEL-Map project to continue to share experiences for the development of future classrooms across Europe.

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## 6. IMPLICATIONS FOR OTHER WORK PACKAGES

### 6.1. WP2 and WP3

Cycle 1 and Cycle 2 scenarios led to the development of Learning Stories and Learning Activities which were positively received by teachers. The resources produced by WP3 were perceived to be innovative whilst being flexible enough to be adapted to meet local needs. The resources are clearly stimulating teachers across a range of European countries. A lot of teachers are not piloting all Learning Activities in a package and some are combining aspects from more than one Learning Story. The picture emerging is one of individual interpretation and implementation. This poses more challenges in terms of evaluation and aggregation of data but is perhaps more likely to lead to innovation through new approaches to learning and increased use of ICT to support teaching and learning.

In Cycle 1, teachers suggested that shorter LSs which could be implemented in a single lesson would be useful. However, short LSs would be more challenging to evaluate. Ideas which have been designed to stimulate update of ICT in STEM subject areas however have not fully met that objective. Mathematics in a Multicultural Setting was not well-received and Students Creating (science) Resources was adapted by many to other subject areas.

After Cycle 1, teachers expressed a desire for more choice for piloting. This was addressed in Cycle 2 by offering two packages of Learning Activities and three Learning Stories. In Cycle 3 teachers have been offered two packages of Learning Activities, each with two possible Learning Stories.

TeamUp is still not reliable and some teachers did not try to overcome the challenges they faced when trying to use the widget, often replacing the tool with alternatives that are more robust. Presenting teachers with prototype tools is necessary in order to explore the potential without too much investment of resources. However, every effort should be made to ensure that the prototypes are usable and do not act as a deterrent to participation in pilots and/or innovation in the classroom.

One of the challenges faced by teachers was students adapting to unfamiliar pedagogical strategies, for example working as a group. It may be beneficial to provide guidance on the common challenges that teachers could face in relation to Learning Activities together with suggestions for addressing them in the classroom. This could be led by Work Package 3 in conjunction with Work Packages 4 and 5.

### 6.2. WP4:

Even with redevelopment of the iTEC Teacher Community for Cycle 2, it was still not fit for purpose. Further consideration is required to ensure that the community provided for use by project participants, and particularly by teachers, is flexible, accessible, usable and offers some benefits. Indeed, it has been revised again for Cycle 3, combining aspects of the iTEC Teacher Community with the iTEC website to

simplify navigation presentation further. However, it is clear that collaboration between participating teachers is a key enabler of the piloting process and many teachers have expressed a desire to network with colleagues internationally. This should be facilitated through the new approach to training and professional development which WP4 has put in place. But monitoring of engagement and communication between teachers through the iTEC Teacher Community should continue to identifying features and support which facilitates this further.

In order to provide evidence for scaling-up and mainstreaming it would be beneficial to involve teachers with a broader range of experiences of ICT and innovation. To avoid bias in the data, NPCs must ensure that teachers pilot in no more than two classrooms from Cycle 3. In addition, to ensure robust cross-cultural analyses NPCs should ensure that at least 10 teachers participate in a single cycle and preferably 20 or more.

National Coordinators produced a variety of resources (video tutorials, summary information, online training) which in some cases were shared but not necessarily systematically. It would be helpful to develop protocols to facilitate more extensive sharing of NPC/NTC resources where possible.

### **6.3. WP11:**

The evaluation (WP5) has a very important role to play in terms of highlighting issues that could impact on the ability of Ministries of Education to scale-up and mainstream scenarios nationally.

When considering country and Learning Story selected, many of the samples are very small. As identified within Cycle 1 and Cycle 2 evaluations and summarised above, there is evidence that two Learning Stories warrant further investigation. Outdoor Study was the most popular Learning Story in Cycle 1 and warrants further investigation in Hungary, Lithuania and Portugal. Students Creating (science) Resources was the most popular Learning Story in Cycle 2 and warrants further investigation in Austria, Estonia, Hungary, Lithuania and Norway.

It should be noted that most of the teachers participating to date are experienced, enthusiastic and are confident users of ICT. Training and support provided through iTEC has been perceived to be one of the enablers. This suggests that to engage teachers with a wider range of experiences and interests a comprehensive programme of training and support will be provided which should be mandatory to ensure maximum reach. The kinds of support required include initial workshops, the facilitation of local online communities and follow-up workshops. National training materials produced in iTEC together with localised guidance on Learning Stories and Learning Activities should be piloted with a small number of teachers who are more representative of the national teaching population. Such resources could then be disseminated widely. In order to ascertain suitability for mainstreaming therefore, larger scale national pilots involving a representative group of teachers should be undertaken.

There are also a number of issues to consider. Insufficient and unreliable infrastructure (devices and internet provision) is still posing a challenge in most countries and is one of the main challenges perceived by teachers in both cycles. This is significant in relation to scaling-up and mainstreaming as increased use of technology across a school will certainly place more pressure on existing infrastructure. Given the current economic climate this is a major challenge for Ministries of Education across Europe. Current debates on Bring Your Own Devices and Bring Your Own Technology should be considered and national evidence reviewed. Some teachers in iTEC encouraged students to use their own devices as media recorders. However, compatibility issues, policies and cultural perceptions acted as barriers in some cases. Reviewing national and local policies in relation to this could provide one solution to the infrastructure issue.

As commonly cited in research literature on ICT in education, the most significant challenge for teachers is time. In Cycle 1 teachers welcomed opportunities to experiment and take risks. It would be beneficial to enable teachers to be released from teaching duties on a regular basis (weekly or fortnightly) to enable them to pursue professional development opportunities. Facilitating action research with accreditation for work undertaken may be one means of achieving this.

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## 7. LESSONS LEARNED AND LOOKING FORWARD

### 7.1. Support for NPCs

Following Cycle 1, analyses of the data together with the outcomes of the triangulation visit process suggested that some NPCs needed further guidance with regards to collecting case study data. This was addressed through revisions to the Evaluation Handbook and covered explicitly in the briefing session for Cycle 2 (as described above). In particular, it was noted that the student interview data could be strengthened through ensuring that NPCs were aware of probing techniques. The guidance on interviewing was strengthened in the Evaluation Handbook and this aspect was covered in the briefing session. In addition, the briefing session also re-inforced the need to evidence claims through the use of direct quotations with Case Study Reports.

### 7.2. Surveys

The administration of the surveys will not be undertaken through the Teacher Community in future cycles. Instead, they will be administered directly through SurveyMonkey using the inbuilt tools which monitor responses and send reminders. This should make administration easier and will reduce the burden on NPCs to monitor responses and chase-up outstanding responses.

In addition, the surveys will be reduced from two to one, and the number of questions will be reduced where possible. This is to reduce the burden on teachers and to keep data collection to an absolute minimum. It is based on reviewing the data and focusing on that which is of most value and offers most in relation to the evaluation questions. For example, it is clear that there is duplication in responses in relation to the benefits of the Learning Stories/Learning Activities and reasons given that the Learning Stories/Learning Activities have potential for leading to innovation in the classroom. It will not detract from the quality of the evaluation. Indeed, if anything it will improve the quality of the data collected as it is likely that teachers will engage more deeply with the questions presented. It will also reduce the resources required to administer the surveys and counteract the additional resource demands resulting from adopting a qualitative, country-by-country approach to the analysis of survey data.

### 7.3. Analytical approach

The analytical approach undertaken in Cycle 1 was not robust enough given the small numbers of teachers participating in some countries, in relation to individual Learning Stories. In addition, aggregating data across countries did not provide sufficient evidence to support country-specific recommendations in relation to mainstreaming, although does provide an overview of how the Learning Stories were received. Considering the cultural differences between countries, the variation in implementation (choice of Learning Story, choice of Learning Activities, individual

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adaptations), it seemed inappropriate to aggregate data across countries in the Cycle 2 evaluation. Instead, data from each country were analysed separately then subjected to a meta-analysis. Therefore, all data analysis is qualitative. This has the advantage of providing detailed information on a country-by-country basis which should assist Work Package 11 with mainstreaming activities. A potential disadvantage is that some Ministries of Education may not be prepared to make policy changes or to mainstream iTEC resources on the basis of qualitative data alone. In addition, this approach demands additional resources and therefore it is challenging to identify and share preliminary findings promptly.

#### **7.4. Future activities**

In the third year of iTEC, Work Package 5 will continue with Task 5.4: the evaluation of Cycle Three and the evaluation of Cycle Four.

WP5 will undertake the following activities in year 2 of iTEC:

- Run the NPC briefing session for Cycle 3 (September 2012);
- Complete analysis of Cycle 2 data (October 2012);
- Review and update online survey (October 2012);
- NPCs arrange translation of online survey and other instruments (October 2012);
- NPCs ensure that data collection takes place in Cycle 3 (September – December 2012);
- Undertake triangulation visit in four countries participating in the large-scale pilots (October – December 2012);
- Review Evaluation Criteria and Evaluation Handbook for Cycle 4 (October – December 2012);
- Revise, if necessary, the Evaluation Criteria and Evaluation Plan (by December 21st 2012);
- Analyse Cycle 3 data (December 2012 – February 2013);
- Internal Deliverable 5.3 Evaluation of Cycle 1 (February 2012);
- If necessary, revise the online survey (March 2013);
- NPCs ensure that data collection takes place in Cycle 4 (April – June 2013);
- Visit four countries participating in the large-scale pilots (April – June 2013);
- Review Evaluation Criteria and Evaluation Handbook (April – June 2013);



- Revise, if necessary, the Evaluation Criteria and Evaluation Plan (by June 30th 2013);
- Analyse Cycle 4 data (June 2011 – August 2013);
- Deliverable 5.4 Evaluation of Cycle Three and Cycle Four (August 31st 2013).

## 8. APPENDICES

### 8.1. Acronyms

#### 4. Country codes

AT Austria

CZ The Czech Republic

DE Germany

EE Estonia

ES Spain

FR France

HU Hungary

IS Israel

IT Italy

LT Lithuania

NO Norway

PT Portugal

SK Slovakia

TR Turkey

UK United Kingdom

#### 5. Other acronyms

BE Bring in the Expert

EEP Embedding Exam Preparation in learning activities

LA Learning Activity

LS Learning Story

MMS Mathematics in a Multicultural Setting

NPC National Pedagogical Coordinator

OS Outdoor Study

SCR Students Creating (science) resources

## 8.2. Triangulation Visit Report: Cycle 1

The purposes of a Triangulation Visit (TV) are:

- to observe the National Pedagogical Co-ordinator's (or their appointed colleague's) case study data collection procedures;
- to ensure understanding of and adherence to the case study data collection protocols as described in the iTEC (Cycle One) Evaluation Handbook (Section 2.3, pp31-51);
- to strive for consistency of data collection procedures across the iTEC countries;
- to carry out the NPC interview (see Evaluation Handbook, Section 2.3.8, p52) face-to-face.

During the lifetime of the iTEC project, each country receives one 2-day Triangulation Visit by a member of the WP5 evaluation team. Where possible, the Triangulation Visit is undertaken by a WP5 colleague who speaks the language of the country being visited. However, where this is not possible, the lesson being observed and the other data collection activities should be conducted in English, or the WP5 colleague will be accompanied by an interpreter.

Towards the end of Cycle One, Triangulation Visits were carried out in 3 countries:

Country	Date of TV	TVisitor
Italy	5.12.11	WP5 colleague + interpreter
Turkey	29.12.11	WP5 colleague fluent in Turkish
Spain	24.1.12	WP5 colleague fluent in Spanish

Guidance for the Triangulation Visitor<sup>16</sup> was provided in a dedicated handbook: *The Visitor's Guide for Triangulation Visits* which includes the following:

- a set of guidance notes<sup>17</sup> (addressed to the TVisitor);

<sup>16</sup> In order to avoid too much repetition and for ease of reference the colleague carrying out the Triangulation Visit will be referred to as the TVisitor.

- a set of questions (that the TVisitor might ask) with answers that explain the requirements of the TV;
- a checklist/proforma (*The Triangulation Visit Checklist*) of what to observe/report on during each of the NPC's data collection activities;
- the interview questions that the NPC will be asking during interviews with:
  - a teacher whose lesson has been observed by the NPC
  - a group of students from the observed lesson
  - the Head Teacher
  - the school's ICT Co-ordinator (if s/he is involved in the iTEC Project)

The TVisitors also received a copy of the *Evaluation Guidance Handbook*; a handbook provided to support the National Pedagogical Co-ordinators' Case Study data collection activities.

NPC Interviews were carried out face-to-face in two of the three countries; the third was carried out on-line soon after the TV.

For the purpose of this report, the countries will be anonymized and referred to as countries A, B and C.

## 6. Results of the Triangulation Visits

The results of the Cycle One (C1) Triangulation Visits are presented in 6 C1 TV Results Tables (for ease of access) which follow precisely the questions included in the TVisitor's *Triangulation Visit Checklist*; a checklist provided to help support the TVisitor's observation of the NPC's data collection activities and practice.

A seventh TV Results Table is included to show NPCs' overall adherence to the data collection protocols and highlights points for consideration by NPCs whilst engaged in their data collection activities.

Each of the six TV Results Tables (1-6), provides information about whether or not (using Yes/No/Partly as in the TV Checklist) a National Pedagogical Co-ordinator has carried out the Case Study data collection activities as required by the protocols set out in the (Cycle One) *Evaluation Guidance Handbook*. Salient points/observations made by the TVisitor are included to shed light on the TVisitors' judgments especially where their judgment is "No" or "Partly" as these two judgments do not always imply non-compliance.

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<sup>17</sup> Includes information and guidance concerning observing the NPC's observation of a Case Study Teacher's lesson.

The seven C1 TV Results Tables are presented as follows:

C1 TV Results Table 1: TVisitors' observations of the NPC's Lesson Observation

C1 TV Results Table 2: TVisitors' observations of the Teacher Interview

C1 TV Results Table 3: TVisitors' observations of the Group Student Interview

C1 TV Results Table 4: TVisitors' observations of the Head Teacher interview

C1 TV Results Table 5: TVisitors' observations of the ICT Co-ordinator interview

C1 TV Results Table 6: TVisitors' observations of other data collection requirements

C1 TV Results Table 7: NPCs' Overall Compliance in Data Collection Activities

## C1 TV Results Table 1: NPCs' Lesson Observations

TVisitors' observations of the NPCs' Lesson Observations			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B/C  (options for TVisitors to answer: Yes; No; Partly)	TVisitors' Observations and selected Quotations	
1) ... have a copy of the teacher's Lesson Plan?	Yes/Yes/Yes	Yes/Country A: The NPC had a copy of not only the lesson plan for the lesson under observation, but also copies of the teacher's plans for forthcoming follow-up work within the project.	3 out of 3 comply
2) ... agree with the teacher where s/he should be placed for observing the lesson?	Yes/Yes/Partly	Yes/Country B: "Beside a professional TV channel recording the lessons, the NPC also made use of his personal camera putting it in an appropriate place and observed the lessons discreetly from the very back row."  Partly/Country C: "The setup of the classroom in working groups meant that the NPC didn't need to stay in one particular place but could move around to see what each group was up to." OK with teacher.	3 out of 3 comply
3) ... observe the lesson and make notes as required?	Partly/Yes/Yes	Partly/Country A: "The NPC filmed the whole lesson using a video camera [fixed on the whole class], but did not take any notes during the lesson. He would . . . take notes . . . at a later stage [when re-watching the recording]."	3 out of 3 comply
4) ... remain unobtrusive throughout the lesson?	Yes/Yes/Yes		3 out of 3 comply
5) ... take an active part in the lesson?  NOTE: This question is included as a "second part" to the previous question about being unobtrusive in order to provide an opportunity to understand the NPC's presence in the classroom	No/Partly/No	No/Country A: ". . . except near the beginning of the lesson where he (reminded) the students they would be filmed."  Partly/Country B: "The NPC . . . intervened . . . to ask the teacher to talk a bit more about . . . aspects of the learning stories."	No compliance required for this.
<b>NPCs' adherence to data collection protocols for observing the Case Study Teachers'</b>			A: 100%

lesson	B: 100%
	C: 100%

Where a TVisitor noted that an expectation had only been “partly” met, it was either because the classroom set-up did not allow the NPC to behave in a particular way (see Question 2) or the TVisitor did not actually see something happening as in Question 3 where the NPC said that he would take notes later whilst watching the recording of the lesson. In these two cases, adherence to data collection protocols is regarded as compliant.

### C1 TV Results Table 2: Teacher Interviews

TVisitors’ observations of the Teachers’ Interviews			Compliance to Data Collection Protocols
(Note: In Country B, 4 teachers were observed and interviewed during the TV)			
Did the NPC . . .	Countries: A/B/C  (option for TVisitors to answer: Yes; No; Partly)	TVisitors’ Observations and selected Quotations	
1) ... put the teacher at ease before the interview began?	Partly/Yes/Yes	Partly/Country A: “The NPC did not say anything explicitly to put the teacher at ease before the interview began. He was however polite and friendly in his approach, which seemed to have the effect of making her feel comfortable. It was also clear from the content of what the teacher said in the interview that she felt comfortable to speak openly about her experiences, including negative ones.”	3 out of 3 comply
2) ... request permission to record the interview?	No/Yes/Yes	No/Country A: “Permission . . . was not explicitly asked for at the beginning of the interview, but presumably had been sought prior to the visit, as the teacher did not ask about the video camera or make any objections to it.”	2 out of 3 comply
3) ... keep to time without “clock watching”?	Yes/Yes/Yes		3 out of 3 comply
4) ... allow the teacher to answer the questions fully without any	Yes/Yes/Yes	Yes/Country B: “The [four] teachers had a lot to say and the NPC seemed very happy with this. Their answers were very	3 out of 3 comply

interruptions?		comprehensive.”	
5) ... get through all the required questions?	Yes/Yes/Yes	Yes/Country A: But ... “The teacher was confused by Question 7 as the NPC read it out verbatim i.e. ‘How, if at all, has your involvement changed your pedagogical approach? (Think about: roles, assessment, individualization, collaboration, creativity, expressiveness/ communication, engagement with a wider range of stakeholders).’ The teacher asked him to repeat and explain it differently twice. . . [and] . . . the answer he obtained from the teacher was also unsatisfactory.”  Yes/Country B: The teachers were allowed to speak freely when answering the first few questions and, although all the questions were answered, the NPC didn’t need to keep to the order in which they were presented.	3 out of 3 comply
6) ... thank the teacher for contributing to the iTEC project?	Partly/Yes/Yes	Partly/Country A: “The NPC thanked the teacher at the end of the interview, but not specifically for contributing to the iTEC project.”  Yes/Country B: “To thank the teachers for their contributions [to the project], the NPC (on behalf of the MoE) gave them some “goodies” and awarded one particular teacher, who had been most active in the project, with a notebook.”	2 out of 3 comply
<b>NPCs’ adherence to data collection protocols for conducting the observed Case Study Teachers’ interviews</b>			A: 67% B: 100% C: 100%

There are many ways of putting teachers at their ease and being “polite and friendly” clearly worked for one of the NPCs and therefore, although the TVisitor for this country noted that the expectation for Question 1) had only been “partly” met, adherence to the data collection protocols for interviewing teachers is regarded as compliant.

The NPC for one country did not explicitly request permission from the teacher to record the interview (see Question 2). However, from the comments made by the TVisitor, it would seem that permission may have been discussed prior to the interview. The TVisitor should have questioned the NPC about this in order to seek clarification, but because this did not occur, the expectation for this is recorded as not having been met.

It is important that all participants are aware of the role they play within the iTEC project and that they are duly thanked for taking part. Because one of the NPCs only thanked the



teacher for taking part in the interview and failed to thank her for her contribution to the whole project (see Question 6), the TVisitor recorded this expectation as being only “partly” met. In this case, adherence to the data collection protocols for interviewing teachers is regarded as non-compliant.

### C1 TV Results Table 3: Student Group Interviews

TVisitors' observations of the Student Group Interviews			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B/C  (options for TVisitors to answer: Yes; No; Partly)	TVisitors' Observations and selected Quotations	
1) ... check with the teacher that all relevant permissions had been granted for recording the student interviews?	Yes/Yes/Yes		3 out of 3 comply
2) ... ask the students themselves if they were happy about being recorded?	Yes/Yes/Yes		3 out of 3 comply
3) ... introduce him/herself to the students at the beginning?	Partly/Partly/Yes	Partly/Country A: The NPC told the pupils his name . . . but the pupils' teacher had introduced the NPC at the start of her lesson.  Partly/Country B: “The students definitely knew him before. Therefore, a formal introduction didn't take place.”	3 out of 3 comply
4) ... use name cards/identity labels so that the students could be addressed using their names?  <b>NOTE:</b> Using name labels for students was a suggestion to help NPCs run the interview in a more personable manner. It was not an expectation that all	No/No/Yes	No/Country A: “The NPC did not use any name cards or form of identity labels. This was a pity, because as a result the interview with the pupils was conducted in the form of a formal lesson, with pupils putting their hands up every time they wanted to talk, and the NPC pointing at the pupil he wanted to answer the question. This was perhaps a less engaging method for the pupils who perhaps would have preferred and been more at ease with being called by their names. The advantage perhaps is that this approach encouraged pupils to speak one at a time, without any reminders from the NPC, so their	No compliance required for this.

NPCs would do this nor indeed need to do this.		contributions will be clear on the recording.” No/Country B: “All students had given a presentation on their Learning Story activities during the lessons [and] introduced themselves at the beginning . . . they just repeated their names [at the beginning of the interview].”	
5) ... keep to time without “clock watching”?	Yes/Yes/Yes	Yes/Country B: “It took about 30 minutes.”	3 out of 3 comply
6) ... allow all the students to have an opportunity to answer at least one of the questions?	No/Yes/Yes		2 out of 3 comply
7) ... get through all the required questions?	Yes/Yes/Yes		3 out of 3 comply
8) ... thank the students for their contributions to the iTEC project?	Partly/Yes/Yes	Partly/Country A: “The NPC thanked the students in general, without making any specific reference to their valued contribution to the iTEC project.” Yes/Country B: “To thank them, the NPC and the teachers organized a mini award ceremony; all students received a backpack in memory of this project.”	2 out of 3 comply
<b>NPCs’ adherence to data collection protocols for conducting the Student Group interviews</b>			A: 86% B: 100% C: 100%

Two of the three TVisitors recorded “partly” met for Question 1) as they noted that the NPCs did not introduce themselves to the students at the beginning of the interview. However, in their comments they also note that the NPCs were either introduced during the lesson or that the NPC was obviously known by the students. Therefore, in both these cases, adherence to this data collection protocol for interviewing students is regarded as compliant.

It is important that any students involved in iTEC are aware of the role they play within the iTEC project and that they are duly thanked for taking part. One of the NPCs only thanked the students for taking part in the interview and failed to thank them for their contribution to the whole project (see Question 8). The TVisitor recorded this expectation as being only

“partly” met and in this case, adherence to this particular data collection protocol for interviewing the student group is regarded as non-compliant.

It is worth noting that one country thanked their students by organising an Awards Ceremony in order to present their students with iTEC memorabilia.

One TVisitor noted that the student group was too big (15 students) and that the interview was led more as a small class teaching session than as a small group interview. The NPC was asking the interview questions and the students were putting up their hands to answer, but no check was made about who had and who had not responded. It is important to have a small group of between 6-10 students so that all students have an opportunity to contribute and also to allow the NPC to probe “Yes/No” responses from the students in order to elicit a greater depth of information from them.

#### C1 TV Results Table 4: Head Teacher Interviews

TVisitors' observations of the Head Teachers' Interviews			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B/C  (options for TVisitors to answer: Yes; No; Partly)	TVisitors' Observations and selected Quotations	
1) ... check that the Head Teacher was familiar with the requirements of the NPC visit and the role of the Triangulation Visitor before the interview began?	Partly/Partly/Yes	<p>Partly/Country A: “Just before the interview began, the Head Teacher asked [me and the other TVisitor] to sit at the same table as her and the NPC. This was probably because she hadn't understood that our role was to be silent observers like ‘flies on the wall’, and that we were not there to actively take part in the interview. . . However, once the interview had officially started, and the camera was rolling, the NPC then contextualized the interview very nicely, and explained the general aims of the NPC visit.”</p> <p>Partly/Country B: “The Head Teacher, as well as other school staff thought that I took an active part in running the iTEC Project. Although I made it clear that I was there only as an observer, they kindly invited me to give an interview for the national TV channel to talk about the international dimension of the project.”</p> <p>Yes/Country C: “There was a chat about the project in general before the interview</p>	1 out of 3 comply

		[during which] the NPC answered several questions about iTEC [and the TVisit].”	
2) ... put the Head Teacher at ease before the interview began?	No/Yes/Yes	No/Country A: “The NPC was friendly, professional and polite in his manner.”	3 out of 3 comply
3) ... request permission to record the interview?	Yes/Yes/Yes		3 out of 3 comply
4) ... keep to time without “clock watching”?	Yes/Yes/Yes		3 out of 3 comply
5) ... allow the Head Teacher to answer the questions fully without any interruptions?	Yes/Yes/Yes		3 out of 3 comply
6) ... get through all the required questions?	Yes/Yes/Yes	Yes/Country A: “Also to be noted . . . the NPC did a good job of rephrasing the questions when necessary, in order to make them more understandable to the Head Teacher. Where relevant, he repeated what the interviewee had said to check that he had understood their reply correctly, and if not gave them the opportunity to explain further.”	3 out of 3 comply
7) ... thank the Head Teacher for allowing the iTEC activities (particularly the TV which involves an “extra” Visitor!) to take place in his/her school?	Partly/Yes/Yes	Partly/Country A: “The NPC’s thanks [were] very short and general, and made no direct reference to the Head Teacher’s or her school’s contribution to the iTEC project as a whole, or for kindly accepting to allow the Triangulation Visitors into the school.”  Yes/Country C: “The Head Teacher was very enthusiastic about iTEC so the NPC showed gratitude for the efforts they are [making] and of course for hosting the TV.”	2 out of 3 comply
<b>NPCs’ adherence to data collection protocols for conducting the Head Teachers’ interviews</b>			A: 71% B: 86% C: 100%

Two of the three TVisitors recorded “partly” met for Question 1). It is clear from the TVisitors’ comments that these two NPCs could have provided Head Teachers with more information both about the purpose of the TVisit and the role of the TVisitor. Therefore, in

both these cases, adherence to this data collection protocol for interviewing Head Teachers is regarded as non-compliant.

As previously noted in the comments related to the teacher interview, there are many ways of putting teachers at their ease and being “friendly, professional and polite”, will help to make an interviewee comfortable. Therefore, although the TVIsitor for one of the countries noted that the expectation for Question 1) had only been “partly” met, adherence to this particular data collection protocol for interviewing Head Teachers is regarded as compliant.

Also as noted previously, it is important that those involved in iTEC are aware of the role they play within the iTEC project as a whole and it is very important that they are duly thanked for the part they play. One of the NPCs only thanked the Head Teacher for taking part in the interview and failed to thank her for allowing her school to be part of the iTEC project or for allowing two TVIsitors to carry out their triangulation duties in her school (see Question 7). The TVIsitor recorded this expectation as being only “partly” met and in this case, adherence to this particular data collection protocol for interviewing the Head Teacher is regarded as non-compliant.

### C1 TV Results Table 5: ICT Co-ordinator Interviews

<b>TVisitors’ observations of the ICT Co-ordinators’ Interviews</b>			<b>Compliance to Data Collection Protocols</b>
<i>*No ICT Co-ordinator was interviewed in Country A as he had not been involved in supporting the project</i>			
<b>Did the NPC . . .</b>	<b>Countries: *B/C  (options for TVisitors to answer: Yes; No; Partly)</b>	<b>TVisitors’ Observations and selected Quotations</b>	
... put the ICT Co-ordinator at ease before the interview began?	Yes/Yes	Yes/Country B: The ICT Co-ordinator’s interview took place at the same time as the teachers and therefore, the answers to the questions below (for this country) are the same as those for the Teachers’ Interview.  Yes/Country C: “There was not much time in this interview due to the ICT Co-ordinator’s schedule, but the NPC managed to create a good atmosphere for the interview.”	2 out of 2 comply
... request permission to record the interview?	Yes/Yes		2 out of 2 comply
... keep to time	Yes/Yes	Yes/Country B: “It took about 30 minutes.”	2 out of 2

without “clock watching”?			comply
... allow the ICT Co-ordinator to answer the questions fully without any interruptions?	Yes/Yes		2 out of 2 comply
... get through all the required questions?	Yes/Yes	Yes/Country B: Although the ICT Co-ordinator was interviewed alongside the teachers, “she answered her own questions individually.”	2 out of 2 comply
... thank the ICT Co-ordinator for contributing to the iTEC project?	Yes/Yes		2 out of 2 comply
<b>NPCs’ adherence to data collection protocols for conducting the ICT Co-ordinators’ interviews</b>			B: 100% C: 100%

There was no ICT Co-ordinator interview in Country A, as he had not been involved in supporting the project.

In the other two countries, the ICT Co-ordinator interviews seem to have been given less emphasis than the other interviews. One NPC had allowed the schedule to include less than the recommended time for the questions (though all were answered) and the NPC from the other country had allowed the ICT Co-ordinator to be included in the teacher interview. Given that this country was interviewing four teachers at the same time (therefore five including the ICT Co-ordinator), and that the TVisitor tells us that all questions were answered in “about 30 minutes” (the time suggested for one teacher to be interviewed), it is doubtful that each individual made the kind of contribution they might have made had they been interviewed separately.

### C1 TV Results Table 6: Other data collection requirements

TVisitors’ observations of other data collection requirements			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B/C  (options for TVisitors to answer: Yes; No; Partly)	TVisitors’ Observations and selected Quotations	

<p>1) ... have all relevant documentation to carry out the data collection activities?</p> <p><b>i.e. . . .</b></p> <ul style="list-style-type: none"> <li>• Evaluation Handbook ?</li> <li>• All sets of Interview Questions?</li> <li>• Copy of the NPC Visit Schedule?</li> <li>• Evidence of Permissions (as required by their own country's legislation) to video/audio record students?</li> </ul>	Partly/Yes/Partly	<p>Partly/Country A: "No evidence of a NPC visit schedule or any written Permissions" . . . though these had been obtained before the TVisit.</p> <p>Yes/Country B: That Permissions had been obtained was assured verbally.</p> <p>Partly/Country C: The teacher "had the Permissions signed by parents . . . but she didn't have them with her that day."</p>	3 out of 3 comply
<p>2) ... provide/arrange for a suitable interview room for their own interview?</p>	Yes/Yes/Yes	Yes/Country B: The NPC f-to-f interview took place out of school in the evening "in a suitable place".	3 out of 3 comply
<p>3) ... have all relevant documents translated for the teachers?</p>	Yes/Yes/Yes		3 out of 3 comply
<p>... have any evidence that s/he had encouraged/reminded the case study teacher to:</p> <ul style="list-style-type: none"> <li>• make use of the iTEC online Teacher Community site?</li> <li>• to write up their multimedia story (iMmS)?</li> <li>• to complete the online survey as soon as teaching with the iTEC Learning Story is finished?</li> </ul>	Partly/Yes/Yes	<p>Partly/Country A: "The NPC mentioned in his interview that he had encouraged [all iTEC] teachers to use the . . . Teacher Community, but because this wasn't functioning properly at the start and . . . teachers were not using it because of a lack of confidence in expressing themselves in English, they decided to provide all iTEC teachers in [Country A] with a national online community, which teachers are using actively." Reminders about iMmS and Survey inferred during Teacher Interview.</p> <p>Yes/Country B: "They [the four teachers] often complained about the iTEC community site that they couldn't reach properly."</p> <p>Yes/Country C: "The NPC checked with the teacher the status of her work including Teacher Community registration, IMmS, surveys."</p>	3 out of 3 comply
<p>4) ... remember to collect all relevant teacher</p>	Yes/Yes/Yes	Yes/Country A: "The NPC collected the relevant lesson plans from the teacher . . . and also asked her to send the pupils' outputs	3 out of 3 comply

documentation before leaving the school? (see Evaluation Handbook, 2.3.2.3.3 p46)		from the observation lesson via email.”  Yes/Country C: “The NPC had the lesson plan and agreed to have the other materials sent by email.”	
<b>NPCs’ adherence to data collection protocols for collection of case study documents</b>			A: 100% B: 100% C: 100%

Although two TVisitors record “partly” met for Question 1), it is clear from their comments that this expectation had been met by the NPCs. Therefore, adherence to this particular protocol, in both these cases, is regarded as compliant.

Therefore, all three NPCs were 100% compliant in relation to adherence to these particular data collection protocols.

### C1 TV Results Table 7: NPCs’ Overall Compliance in Data Collection Activities

<b>NPC Data Collection Activity</b>	<b>Country A Compliance</b>	<b>Country B Compliance</b>	<b>Country C Compliance</b>
Observation of Case Study Teacher’s lesson	<b>100%</b>	<b>100%</b>	<b>100%</b>
Conducting observed Case Study Teacher interview	<b>67%</b>	<b>100%</b>	<b>100%</b>
Conducting Student Group interview	<b>86%</b>	<b>100%</b>	<b>100%</b>
Conducting Head Teacher interview	<b>71%</b>	<b>86%</b>	<b>100%</b>
Conducting ICT Co-ordinator interview	<b>No interview</b>	<b>100%</b>	<b>100%</b>



Carrying out other data collection requirements	100%	100%	100%
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## 7. Final Comments

### 1. NPCs need to remember:

- to assure interviewees of confidentiality
- to seek permission for recording interviews at the beginning of the interview; re-ask even if this has been agreed beforehand
- to thank all interviewees for the part they are playing in iTEC as well as for taking part in their interview
- to ensure that all interviewees have their full amount of interview time in order to allow them to provide full and detailed answers that reflect their own personal views/experiences
- to ensure that student groups for interviewing should preferably consist of 6 students and should not exceed 10.

### 2. TVisitors need to remember that:

- they may not be able to see certain documents that are required (eg: Parent Permission Letters), and it is all right to accept the word of a professional that the document/s do exist
- where a document is not seen by the TVisitor, they should ask the NPC about its existence/whereabouts, thus avoiding a recording of “partly” when an expectation has actually been met.

### 3. Table 7 highlights areas for special mention during NPCs’ and TVisitors’ Cycle Two Briefing and Training sessions.

### 4. The six Results Tables (1-6) will contribute to NPC and TVisitor training for Cycle Two.

### 8.3. Triangulation Visit Report: Cycle 2

The purposes of a Triangulation Visit (TV) are:

- to observe the National Pedagogical Co-ordinator's (or their appointed colleague's) case study data collection procedures;
- to ensure understanding of and adherence to the case study data collection protocols as described in the iTEC (Cycle Two) Evaluation Handbook
- to strive for consistency of data collection procedures across the iTEC countries.

During the lifetime of the iTEC project, each country receives one 2-day Triangulation Visit by a member of the WP5 evaluation team. Where possible, the Triangulation Visit is undertaken by a WP5 colleague who speaks the language of the country being visited. However, where this is not possible, the lesson being observed and the other data collection activities should be conducted in English, or the WP5 colleague will be accompanied by an interpreter.

Towards the end of Cycle Two, Triangulation Visits were carried out in 2 countries:

Country	Date of TV	TVisitor
France	8.6.12	WP5 colleague fluent in French
Germany	5.6.12	WP5 colleague fluent in German

Guidance for the Triangulation Visitor<sup>18</sup> was provided in a dedicated handbook: *The Visitor's Guide for Triangulation Visits* which includes the following:

- a set of guidance notes<sup>19</sup> (addressed to the TVisitor);
- a set of questions (that the TVisitor might ask) with answers that explain the requirements of the TV;
- a checklist/proforma (*The Triangulation Visit Checklist*) of what to observe/report on during the NPC's data collection activities;

<sup>18</sup> In order to avoid too much repetition and for ease of reference the colleague carrying out the Triangulation Visit will be referred to as the TVisitor.

<sup>19</sup> Includes information and guidance concerning observing the NPC's observation of a Case Study Teacher's lesson.

- 
- the interview questions that the NPC will be asking during interviews with:
    - a teacher whose lesson has been observed by the NPC
    - a group of students from the observed lesson
    - the Head Teacher
    - the school's ICT Co-ordinator (if s/he is involved in the iTEC Project)

The TVisitors also received a copy of the *Evaluation Guidance Handbook: Cycle Two*; a handbook provided to support the National Pedagogical Co-ordinators' Case Study data collection activities.

For the purpose of this report, the countries will be anonymised and referred to as countries A and B.

## 8. Results of the Triangulation Visits

The results of the Cycle 2 Triangulation Visits are presented in 6 C2 TV Results Tables (for ease of access) which follow precisely the questions included in the TVisitor's *Triangulation Visit Checklist*; a checklist provided to help support the TVisitor's observation of the NPC's data collection activities and practice.

A seventh TV Results Table is included to show NPCs' overall adherence to the data collection protocols and highlights points for consideration by NPCs whilst engaged in their data collection activities.

Each of the six TV Results Tables (1-6), provides information about whether or not (using Yes/No/Partly as in the TV Checklist) a National Pedagogical Co-ordinator has carried out the Case Study data collection activities as required by the protocols set out in the *Evaluation Guidance Handbook: Cycle Two*. Salient points/observations made by the TVisitor are included to shed light on the TVisitors' judgments, especially where their judgment is "No" or "Partly" as these two judgments do not always imply non-compliance.

The seven C2 TV Results Tables are presented as follows:

C2 TV Results Table 1: TVisitors' observations of the NPC's Lesson Observation

C2 TV Results Table 2: TVisitors' observations of the Teacher Interview

C2 TV Results Table 3: TVisitors' observations of the Group Student Interview

C2 TV Results Table 4: TVisitors' observations of the Head Teacher interview

C2 TV Results Table 5: TVisitors' observations of the ICT Co-ordinator interview

C2 TV Results Table 6: TVisitors' observations of other data collection requirements

C2 TV Results Table 7: NPCs' Overall Compliance in Data Collection Activities

## C1 TV Results Table 1: NPCs' Lesson Observations

TVisors' observations of the NPCs' Lesson Observations			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B  (options for TVisors to answer: Yes; No; Partly)	TVisors' Observations and selected Quotations	
1) ... have a copy of the teacher's Lesson Plan?	Yes & Partly/Yes	Yes & Partly/Country A: Prior to the TV, the NPC received the CD-rom containing the resources created by the students, that was used as a basis of the science forum workshop observed during the TV, and can be considered as the Lesson Plan.	2 out of 2 comply
2) ... agree with the teacher where s/he should be placed for observing the lesson?	Yes/Partly	Yes/Country A: Yes, the NPC suggested to sit at the back ... The teachers agreed and the NPC settled her camera at the back of the classroom.  Partly/Country B: The lesson was held in the computer room, therefore, the NPC could move around freely and see what the different groups were working on.	2 out of 2 comply
3) ... observe the lesson and make notes as required?	Yes/Yes		2 out of 2 comply
4) ... remain unobtrusive throughout the lesson?	Yes/Yes	Yes/Country A: Yes, the NPC stayed at the back most of the time during the observation. The session observed was a science forum workshop, the pupils were working in small groups around several "islands ... [the] pupils did not notice [the microphone/recorder] ... One group of pupils noticed the camera at some point but ... they did not pay attention any longer ...  Yes/Country B: The NPC asked questions of the teacher when he was free, but did not disturb the lesson.	2 out of 2 comply
5) ... take an active part in the lesson?  NOTE: This question is included as a "second	No/No	No/Country A: "The NPC did not take part in any way in the lesson."  No/Country B: "She only looked at what the	No compliance required for this.

part” to the previous question about being unobtrusive in order to provide an opportunity to understand the NPC’s presence in the classroom		students were doing, but did not intervene.”	
<b>NPCs’ adherence to data collection protocols for observing the Case Study Teachers’ lesson</b>			A: 100% B: 100%

Country A: The TVisitor added a preliminary remark: “The session observed during the TV was not a traditional lesson (one teacher, one classroom, one hour) but a workshop organised in the frame of the Science forum organised by several classes from several schools of the area. We observed the work of one specific classroom, which chose to implement the Learning Story ‘Students creating sciences resources’.”

Where a TVisitor noted that an expectation had only been “partly” met, it was because the classroom set-up allowed the NPC to behave in a particular way (see Question 2) without disturbing the students. **In this case, adherence to data collection protocols is regarded as compliant.**

## C2 TV Results Table 2: Teacher Interviews

<b>TVisitors’ observations of the Teachers’ Interviews</b>			<b>Compliance to Data Collection Protocols</b>
<b>(Note: In Country B, 4 teachers were observed and interviewed during the TV)</b>			
<b>Did the NPC . . .</b>	<b>Countries: A/B</b>  <b>(option for TVisitors to answer: Yes; No; Partly)</b>	<b>TVisitors’ Observations and selected Quotations</b>	
1) ... put the teacher at ease before the interview began?	Yes/Yes	Yes/Country A: “The NPC introduced me (the TV observer from EUN on behalf of WP5) and we discussed briefly.”  Yes/Country B: “She introduced us and spent a few minutes complementing the school and doing small talk to put the teacher at ease.”	2 out of 2 comply
2) ... request permission to record the interview?	Yes/Yes	Yes/Country A: This was done prior to the TV.	2 out of 2 comply

3) ... keep to time without “clock watching”?	Yes/Yes	Yes/Country A: Very good time management. Yes/Country B: She was recording the interview with her computer and discreetly looked at the time on the laptop to keep the time, but both teacher and NPC were very flexible time-wise.	2 out of 2 comply
4) ... allow the teacher to answer the questions fully without any interruptions?	Yes/Yes	Yes/Country A: Good interaction, no interruptions. Yes/Country B: The NPC was very patient and let the teacher talk without interruptions.	2 out of 2 comply
5) ... get through all the required questions?	Yes/Yes	Yes/Country B: And even some more when curiosity struck – also to keep up the conversational style of the interview.	2 out of 2 comply
6) ... thank the teacher for contributing to the iTEC project?	Partly/Yes	Partly/Country A: Thanked her for her support in general and for having hosted the TV.	1 out of 2 comply
<b>NPCs’ adherence to data collection protocols for conducting the observed Case Study Teachers’ interviews</b>			A: 86% B: 100%

It is important that all participants are aware of the role they play within the iTEC project and that they are duly thanked for taking part. Because one of the NPCs only thanked the teacher for “her support in general” and for hosting the TV, but failed to thank her for her contribution to the whole project (see Question 6), the TVisitor recorded this expectation as being only “partly” met. In this case, adherence to the data collection protocols for interviewing teachers is regarded as non-compliant.

## C2 TV Results Table 3: Student Group Interviews

<b>TVisitors’ observations of the Student Group Interviews</b>			<b>Compliance to Data Collection Protocols</b>
<b>Did the NPC . . .</b>	<b>Countries: A/B</b> <small>(options for TVisitors to answer: Yes; No; Partly)</small>	<b>TVisitors’ Observations and selected Quotations</b>	
1) ... check with the teacher that all relevant permissions	Yes/Yes	Yes/Country A: This was done prior to the visit.	2 out of 2 comply

had been granted for recording the student interviews?		Partly/Country B: students were asked during session, teacher arranged permissions prior to the visit.	
2) ... ask the students themselves if they were happy about being recorded?	Yes/Yes		2 out of 2 comply
3) ... introduce him/herself to the students at the beginning?	Yes/Yes	Yes/Country A: The NPC explained in simple words what she was doing.	2 out of 2 comply
4) ... use name cards/identity labels so that the students could be addressed using their names?  <b>NOTE:</b> Using name labels for students was a suggestion to help NPCs run the interview in a more personable manner. It was not an expectation that all NPCs would do this nor indeed need to do this.	Partly/No	Partly/Country A: The NPC asked the pupils their name before starting the interview, she remembered their names and called them by their name during the session; she did not used labels and in my view it was not necessary.	No compliance required for this.
5) ... keep to time without "clock watching"?	Yes/Yes	Yes/Country B: Very flexible time setting. The NCP discreetly looked at the time on her laptop sometimes.	2 out of 2 comply
6) ... allow all the students to have an opportunity to answer at least one of the questions?	Yes/Yes	Yes/Country A: NPC asked questions to all pupils. Good balance of participation among the pupils.  Yes/Country B: The NPC first asked an open question where students could answer when they want, but sometimes she directly asked for the opinion of the students who talked less during the interview.	2 out of 2 comply
7) ... get through all the required questions?	Yes/Yes	Yes/Country A: Yes, data collection was very well done and detailed, the NPC rephrased pupils' statements to be precise and be sure she understood well what they were saying (in their own language – pupils	2 out of 2 comply

		were 10 years old), and she did it in a very neutral way (no judgment, no comments in what they were telling her). She summarized statements and asked for additional info when needed.	
8) ... thank the students for their contributions to the iTEC project?	Yes/Yes		2 out of 2 comply
<b>NPCs' adherence to data collection protocols for conducting the Student Group interviews</b>			A: 100% B: 86%

“Partly” answer to Q1 for country B was not explained, so we can only assume non-compliance.

#### C2 TV Results Table 4: Head Teacher Interviews

<b>TVisitors' observations of the Head Teachers' Interviews</b>			<b>Compliance to Data Collection Protocols</b>
<b>Did the NPC . . .</b>	<b>Countries: A/B</b> <small>(options for TVisitors to answer: Yes; No; Partly)</small>	<b>TVisitors' Observations and selected Quotations</b>	
1) ... check that the Head Teacher was familiar with the requirements of the NPC visit and the role of the Triangulation Visitor before the interview began?	Yes/Partly	Partly/Country B: The Head teacher was already updated by the ITEC teacher.	2 out of 2 comply
2) ... put the Head Teacher at ease before the interview began?	Yes/Yes	Yes/Country A: Yes he was very at ease.  Yes/Country B: The NPC introduced us and spent a few minutes complementing the school and doing small talk to put the teacher at ease.	2 out of 2 comply
3) ... request permission to record	Yes/Yes		2 out of 2 comply



the interview?			
4) ... keep to time without “clock watching”?	Yes/Yes	Yes/Country A: Very good time management.	2 out of 2 comply
5) ... allow the Head Teacher to answer the questions fully without any interruptions?	Yes/Yes	Yes/Country A: Good interaction, no interruptions.	2 out of 2 comply
6) ... get through all the required questions?	Yes/Yes		2 out of 2 comply
7) ... thank the Head Teacher for allowing the iTEC activities (particularly the TV which involves an “extra” Visitor!) to take place in his/her school?	Yes/Yes	Yes/ Country A: Thanked him for his support in general and for having taken part in the interview.	1 out of 2 comply
<b>NPCs’ adherence to data collection protocols for conducting the Head Teachers’ interviews</b>			A: 86% B: 100%

Country A: The TVisitor added a preliminary remark: “The TV was done in a primary school and in the [country’s] system, at this school level; the most relevant person to interview is not the Head Teacher but the local representative of the Ministry of Education.”

Although the TVisitor for one of the countries noted that the expectation for Question 1) had only been “partly” met, adherence to this particular data collection protocol for interviewing Head Teachers is regarded as compliant because the Head Teacher had already been familiarised by the ITEC teacher.

It is important that all participants are aware of the role they play within the iTEC project and that they are duly thanked for taking part. Because Country A’s NPC only thanked the head teacher for “his support in general” and for having taken part in the interview, but failed to thank her for her contribution to the whole project (see Question 7), the TVisitor should have recorded this expectation as being only “partly” met. In this case, adherence to the data collection protocols for interviewing teachers is regarded as non-compliant.

## C2 TV Results Table 5: ICT Co-ordinator Interviews

<b>TVisors' observations of the ICT Co-ordinators' Interviews</b>			<b>Compliance to Data Collection Protocols</b>
<i>*No ICT Co-ordinator was interviewed in Country A as he had not been involved in supporting the project</i>			
<b>Did the NPC . . .</b>	<b>Countries: A/B  (options for TVisors to answer: Yes; No; Partly)</b>	<b>TVisors' Observations and selected Quotations</b>	
1)... put the ICT Co-ordinator at ease before the interview began?	Yes/Yes		2 out of 2 comply
2)... request permission to record the interview?	Yes/Yes		2 out of 2 comply
3)... keep to time without "clock watching"?	Yes/Yes	Yes/Country A: Very good time management.	2 out of 2 comply
4)... allow the ICT Co-ordinator to answer the questions fully without any interruptions?	Yes/Yes	Yes/Country A: Good interaction, no interruptions.	2 out of 2 comply
5)... get through all the required questions?	Yes/Yes		2 out of 2 comply
6)... thank the ICT Co-ordinator for contributing to the iTEC project?	Yes/Yes	Yes/Country A: Not for iTEC project specifically but more in general for its support and for having taken part in the interview.	1 out of 2 comply
<b>NPCs' adherence to data collection protocols for conducting the ICT Co-ordinators' interviews</b>			A: 86% B: 100%

It is important that all participants are aware of the role they play within the iTEC project and that they are duly thanked for taking part. Because Country A's NPC only thanked the

ITC Co-ordinator “in general for [his/her] support and for having taken part in the interview”, but failed to thank her for her contribution to the whole project (see Question 6), the TVisitor should have recorded this expectation as being only “partly” met. In this case, adherence to the data collection protocols for interviewing teachers is regarded as non-compliant.

## C2 TV Results Table 6: Other data collection requirements

TVisitors' observations of other data collection requirements			Compliance to Data Collection Protocols
Did the NPC . . .	Countries: A/B  (options for TVisitors to answer: Yes; No; Partly)	TVisitors' Observations and selected Quotations	
1) ... have all relevant documentation to carry out the data collection activities?  i.e. . . . • Evaluation Handbook ? • All sets of Interview Questions? • Copy of the NPC Visit Schedule? • Evidence of Permissions (as required by their own country's legislation) to video/audio record students?	Yes/Yes	Yes/Country B: The NPC was very well prepared and had the evaluation handbook, the set of interview questions and the Copy of the NPC visit schedule.	2 out of 2 comply
2) ... provide/arrange for a suitable interview room for their own interview?	Yes/Partly	Partly/Country B: The teacher took care of this part mainly, as he knew the facilities of the schools better.	2 out of 2 comply
3) ... have all relevant documents translated for the teachers?	Yes/Partly	Partly/Country B: The NPC translated the questions for the teachers on the spot.	2 out of 2 comply
4)... have any evidence that s/he had	No/Yes	No/Country A: At the time of the TV I have not checked the NPC had evidences for these. [Subsequently it	2 out of 2 comply

encouraged/remembered the case study teacher to: <ul style="list-style-type: none"> <li>• make use of the iTEC online Teacher Community site?</li> <li>• to write up their multimedia story (iMmS)?</li> <li>• to complete the online survey as soon as teaching with the iTEC Learning Story is finished?</li> </ul>		was ascertained that the NPC had followed these up] <p>Yes/Country B: She mentioned it and encouraged the teacher various times.</p>	
5) ... remember to collect all relevant teacher documentation before leaving the school? (see Evaluation Handbook, 2.3.2.3.3 p46)	Yes/Yes	Yes/Country A: The NPC collected the relevant documents and the teacher would send other documents by e-mail.	2 out of 2 comply
<b>NPCs' adherence to data collection protocols for collection of case study documents</b>			A: 100% B: 100%

Although Country B answered "Partly" to questions 2 and 3, the issues were dealt with in an appropriate alternative manner. In these cases, adherence to data collection protocols is regarded as compliant.

For question 4, no evidence was provided during the TV but was ascertained afterwards. Therefore, adherence to data collection protocols is regarded as compliant.

## C2 TV Results Table 7: NPCs' Overall Compliance in Data Collection Activities

NPC Data Collection Activity	Country A	Country B
	Compliance	Compliance
Observation of Case Study Teacher's lesson	100%	100%

Conducting observed Case Study Teacher interview	86%	100%
Conducting Student Group interview	100%	100%
Conducting Head Teacher interview	86%	100%
Conducting ICT Co-ordinator interview	86%	100%
Carrying out other data collection requirements	100%	100%

## 9. Final Comments

There were fewer issues arising in Cycle 2 as compared to Cycle 1 suggesting that the NPC training and TVisitor guidance/training addressed some of the weaknesses in the data collection and TVisit processes. The lack of full compliance is mainly associated with the thanks offered at the end of the interview when NPCs should thank interviewees for the part they are playing in iTEC as well as offering general thanks.

1. NPCs need to remember:
  - to thank all interviewees for **the part they are playing in iTEC** as well as for taking part in their interview
2. TVisitors need to remember that:
  - In some situations NPCs may be able to move around the classroom during the lesson but that agreement should still be sought with the class teacher.
  - That if the NPC does not thank interviewees for the part they are playing in iTEC as well as for taking part in their interview then they should record this as 'Partly' not 'Yes'.
3. Table 7 highlights areas for special mention during NPCs' and TVisitors' Cycle Two Briefing and Training sessions.
4. The six Results Tables (1-6) will contribute to NPC and TVisitor training for Cycle Three.

## 8.4. Triangulation Visit Guidance: Cycle 1

### 10. Introduction

This set of guidelines is provided for colleagues who will be carrying out Triangulation Visits (TVs) on behalf of the iTEC Evaluation Team (WP5).

The guidance in this document is presented in the form of:

- a set of notes addressed to the colleague carrying out the TV<sup>20</sup> (that's you!);
- questions (that you, the Visitor, might ask) with answers that explain the requirements of the visit.

During the lifetime of the project, **each country will receive one 2-day Triangulation Visit** by a member of WP5 or a nominated colleague who speaks the language of the country being visited. It is recommended that Day One of the TV should be dedicated to observing the National Pedagogical Co-ordinator's (NPC's) data collection activities ([see p3](#)) and that your interview of the NPC should be carried out on Day Two. However, you may find that, for practical scheduling reasons one or two of the participant interviews to be conducted by the NPC have been scheduled for Day Two. This is all right, but please try to make the NPC Interview your last activity if at all possible; it's easier to do all your observing activity first and then switch to being the interviewer, than moving back and forth from one role to another!

The purposes of the visit are:

- to observe the NPC's (or their appointed colleague's) case study data collection procedures;
- to ensure adherence to the case study data collection protocols as described in the iTEC Evaluation Handbook (Section 2.3; pp 31-55);
- to strive for consistency of data collection procedures across the iTEC countries;
- to carry out the NPC interview (see Evaluation Handbook, Section 2.3.8; p52) face-to-face.

The following documents relate to the Triangulation Visits and are available on-line at:

- a. Triangulation Visit Checklist (available online)
- b. the Evaluation Handbook (available online)
- c. the NPC's Case Study Visit Schedule (provided by the NPC)

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<sup>20</sup> In order to avoid too much repetition and for ease of reference the colleague carrying out the Triangulation Visit will be referred to as the Visitor.

- d. the NPC Interview Schedule (located within the Evaluation Handbook)
- e. the NPC Interview Record Sheet (available online)

The above documents are also available to National Pedagogical Co-ordinators.

TV guidance is presented below under the following headings:

1. [Preparation for the visit](#)
2. [During the visit](#)
3. [After the visit](#)

## 11. Preparation for the visit

### 1. *When do the Triangulation Visits take place?*

Triangulation Visits are timed to coincide with an NPC's case study data collection activities. These will be taking place at a time when a case study teacher will be implementing an iTEC Learning Story.

### 2. *Who arranges the Triangulation Visits?*

The visits are arranged as follows:

1. In the first instance, WP5 Leaders will:
  - a. contact the NPCs who are selected to receive a TV;
  - b. send relevant documents to the NPCs and to you, the Triangulation Visitor.
2. You and the NPC will then need to liaise (please cc all correspondence to [m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk)) in order to:
  - a. agree and arrange the Triangulation Visit<sup>21</sup> (2 full days with the NPC<sup>22</sup>) and to request a copy of the case study visit **schedule** that the NPC has agreed with the case study teacher (see Evaluation Handbook, Boxed Note 2, p.40);

**NB:** Please check the NPC's schedule carefully to ensure that all the data collection activities will be taking place (see extract from Evaluation Handbook in the box below) on the day of your visit to the school.

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<sup>21</sup> **Note:** Travel and subsistence will be met by WP5

<sup>22</sup> **Note:** 2 full days with the NPC PLUS travel either side of these days if necessary

(This extract is addressed to the NPC in the Evaluation Handbook)




“In each Cycle, when you [NPC] visit each of your three case study teachers, you will be carrying out the following activities:

- one observation of one iTEC lesson being taught by the case study teacher;
- four interviews
  - the case study teacher whose lesson you observed
  - a small group of students who participated in the observed lesson
  - the Head Teacher (HT)
  - the ICT Co-ordinator (ICTC)
- Collection of case study teacher’s documentation”

**Evaluation Handbook (p39)**

- b. ask the NPC to arrange a **time** (one hour during which there will be no interruptions) and a **suitable place** (where there is privacy and quiet) for you to carry out the NPC interview on Day Two of your TV.
  - c. seek the NPC’s consent to audio record his/her interview.
3. You are required to keep WP5 Leaders informed of all agreed TV activity. Copying-in to emails is probably the easiest way to do this . . . please cc: Maureen Haldane ([m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk)) in to all correspondence related to TVs.

### **3. What else do I need to do?**

1.  In preparation for your visit, you will need to **read the Evaluation Handbook** and be very familiar with what the NPC is required to do whilst carrying out data collection activities. Although **it is advisable to read the whole of the document, the most important part is the Section: 2.3.2 Guidance on the NPC Visit to the Case Study Teachers (pp 38-51).**
2.  You will also need to **read through the Triangulation Visit Checklist** and make yourself familiar with the “Guidance for Observing” at the beginning of TV Checklist.
3.  Ensure that you have the following documents with you (either hard copy or electronically, but bear in mind that you will be required to provide your findings to WP5 Leaders electronically):
  - a. Evaluation Handbook
  - b. Triangulation Visit Checklist
  - c. NPC’s Case Study Visit Schedule (sent to you by the NPC)
  - d. NPC Interview Schedule



e. NPC Interview Record Sheet

## 12. During the visit

### 1. At the school (Day One)

On Day One of your school visit, you will be **observing the NPC's data collection activities** which include:

- The NPC observing one full iTEC lesson being taught by the case study teacher;
- An interview with the case study teacher whose lesson the NPC observed;
- An interview with a small group of students who participated in the observed lesson;
- An interview with the Head Teacher (HT);
- An interview with the ICT Co-ordinator (ICTC);
- NPC's collection of the case study teacher's documentation.

The following points provide important information about what to do during your school visit:

1. If possible, it is preferable to arrive at the School Reception either with, or at the same time as your NPC who will then be able to make the introductions to relevant school colleagues and to the case study teacher in particular.
2. The NPC and/or the case study teacher will be your host/s whilst in school unless the school requires otherwise.
3. As the main purpose of your TV is to observe the NPC's data collection procedures, the NPC's case study visit schedule will provide you with the structure of your visit. For information about the NPC's schedule, see: (boxed) "Notes for your attention" nos: 1-5, p40 of the Evaluation Handbook.
4. Whilst observing the case study teacher's lesson and the interviews, you will need to:
  - a. use the TV Checklist provided;
  - b. ensure that you are adhering to the "Guidance for Observing".

**Note: Guidance on how to use the checklist is contained within the TV Checklist itself.**

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Please also note that you may have time in your Day One schedule to carry out the NPC Interview (see 2.A. below). Remember that you will need a full hour for this interview.

## **2. NPC Interview (Day Two)**

### **A. The NPC Interview**

The following points provide important information about carrying out the NPC Interview:

1. The interview should take **no more than one hour and should be conducted in English**.
2. Ensure that the interview finishes on time, but try to avoid “clock watching” as this can be very off-putting for those being interviewed.
3. Remind the NPC that you need to audio record the interview.
4. Those being interviewed need to be put at their ease, but because there is a lot to cover, it would be helpful if casual/friendly chat/discussion takes place before the time allocated to the interview.
5. Try to keep to the specified questions, but let them be a guide rather than a script.
6. Record NPC’s answers (in note-form) on a rough copy of the NPC Interview Record Sheet.
7. Remember that you will be able to check your notes against the audio recording when writing up the Final Interview Record Sheet. It is helpful, therefore, occasionally to make a note of the time against the questions in order to make it easy after the interview to find the right place in the recording
8. Sometimes you will need to ‘probe’ for more detail. To do this, you will use phrases/questions such as:
  - “Can you give me a little more information about that?”
  - “Can you think of an example to illustrate the point you are making?”
  - “Can you provide me with a little more detail?”
9. You may find that a particular question may not be applicable in a particular interview or has already been covered within a response to a previous question. It is all right to miss out those questions that do not apply.
10. At the end of the interview, offer to let the NPC have a copy of the audio recording and a copy of the final interview record sheet if they would like to have either or both of these.

### **B. There may be a few other things to consider/do . . .**

When the NPC and the case study teacher are organising the schedule for the NPC’s data collection visit, they will be conscious of the need to schedule the activities so as to avoid disruption to the smooth running of the school day. For this reason, it may not be possible to complete all the interviews on Day One. It may also mean that you will have some spare time between your formal triangulation visit tasks. If this occurs on your visit, you may be offered opportunities to make use of this time by taking a more general interest in the iTEC school; do feel free to take up this offer.

However, it is possible that certain schools may be contributing more than one case study and while on the premises, the NPC may have a second case study teacher to observe and two subsequent interviews to conduct (one with the observed teacher and one with the group of students from the observed lesson). If this situation arises, you are free to make one of three decisions:

1. If invited by the NPC and teacher, and if scheduling permits, take a **formal** interest and **complete a second set of data collection observations** (a lesson observation plus the two subsequent interviews). This would be great news for the Evaluation Team!
2. If invited by the NPC and teacher, but scheduling doesn't allow you to undertake a complete set of data collection activities involving this teacher, take an **informal** interest in observing any combination of the NPC's three data collection activities;
3. With permission from the school and NPC, take a more general interest in the iTEC school; meeting other iTEC teachers, meeting students etc

The NPC may also request some of your time to engage in discussions about their data collection practice, after all, the NPC's practice has been the focus of your observations! However, please be aware of the following point . . .

**A Cautionary Note:** Giving feedback is not something to be undertaken lightly and only colleagues who are qualified and experienced should agree to a formal feedback session. However, it is acceptable for you to share your checklist notes and to allow the NPC to add any points that will clarify, exemplify or amplify the points you have made.

To summarise, (but bearing in mind the points made above) . . . in addition to your Interview with the NPC, the following are possible on Day Two:

- There may still be one or two of the NPC's required interviews still to observe.
- The NPC may invite you to see another case study teacher teaching an iTEC lesson. This is a wonderful opportunity and may be undertaken, schedule permitting, on either a **formal or informal basis**.
- You may be invited to meet with other iTEC teachers and/or students at the school. This will be on an **informal basis**.
- The NPC may ask for some time to be put aside (beyond the hour's interview) to enable him/her to receive **feedback on their data collection activities**.

## 13. After the visit

### 1. Within one week of the NPC interview:

... please send a first draft of your completed NPC Interview Record Sheet to the NPC interviewed in order to allow the NPC to check that s/he agrees with what you have recorded (and to make amendments/adjustments if necessary).

**NB:** Please be sure to ask the NPC to deal with this **as quickly as possible** so that you can return the jointly agreed document to WP5 within two weeks of the interview date.

### 2. Within two weeks of the TV ...

... please send (as email attachments):

- a copy of the NPC's Case Study Visit Schedule
- your **completed** Triangulation Visit Checklist
- your **completed** NPC Interview Record Sheet
- the audio recording of the NPC Interview
- any accompanying video clips or photographs (for which you have acquired the relevant permissions)

... to: Maureen Haldane ([m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk))

**May we wish you a happy and successful Triangulation Visit!**

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## 8.5. Triangulation Visit Checklist: Cycle 1

### 14. Introduction

This document relates specifically to the following three purposes of your Triangulation Visit:

1. to observe the NPC's (or their appointed colleague's) case study data collection procedures;
2. to ensure adherence to the case study data collection protocols as described in the **iTEC Evaluation Handbook** (Section 2.3; pp 31-55);
3. to strive for consistency of data collection procedures across the iTEC countries.

On your Triangulation Visit, much of your time will be spent observing the NPC collecting evaluation data. In brief, Sections One and Two relate specifically to this activity whilst Section Three is a checklist related specifically to the required Triangulation Visit activities.

- **Section One** provides you with a set of Observation Guidelines.
- **Section Two** provides you with a checklist for you to record your comments about the NPC's data collection procedures. Your comments need only to be very brief, but remember that Purpose 3 is to strive for consistency of data collection procedures. **It is vital, therefore, that you are very familiar with the Evaluation Handbook, particularly Section 2.3 (pp31-55), in order to complete the checklist fairly.**
- **Section Three** provides you with a visit checklist to help you ensure that you have completed all the required TV activities.

**Please note:** both Sections Two and Three of this document need to be completed.

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### 15. Section One: Observation Guidelines

#### Observing the NPC in the classroom

You will be observing the NPC whilst s/he is involved in observation of a whole lesson.

Your focus will be on "observing the observer".

You will be making brief notes in the Checklist below

#### Before the lesson, you will need to:

- check with the teacher where s/he would like you to be placed for "observing the observer";

- provide assurances to the teacher being observed that you are focused on observing the process being put in place by the NPC and that you are not there to assess the teacher. Remember that even the most confident teachers can feel nervous when being observed and trying something new, particularly when there is more than one visitor in the classroom;
- decide (**if you have agreed with the teacher and NPC that you can take photographs or video recordings**) where it is best to place your video recorder and/or tripod (think batteries and/or sockets . . . you may need an extension lead!);
- ensure that any photographing or recording is not intrusive and does not in any way interrupt the lesson.

**NB:** It is essential for you to check that permissions are in place for all the children in the class if you are photographing and/or recording.

**During the lesson, you will need to:**

- make notes (in the Checklist below) on the NPC's observation procedures;
- remain focused on "observing the observer"
- **discreetly** take photographs or video recordings

## Observing the NPC carrying out Interviews

You will be observing four interviews that will take place between the NPC and . . .

- the case study teacher whose lesson you observed
- a small group of students who participated in the observed lesson
- the Head Teacher (HT)
- the ICT Co-ordinator (ICTC)

**During the interviews you will need to:**

- sit apart from the interviewer and the interviewees;
  - be as unobtrusive as possible;
  - avoid being drawn into any discussion and avoid NVC<sup>23</sup> responses (particularly important in the student group interview);
  - record comments in the TV Checklist below.
- 
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<sup>23</sup> NVC: non-verbal responses (ie facial expressions or any other "body language")

## 16. Section Two: Triangulation Visit Checklist

In the TV Checklist below, there are three columns; the first describes what the NPC is expected to be doing, the second requires a “Yes/No/Partly” response and the right-hand column allows you to provide brief notes to exemplify or amplify your “Yes/No/Partly” response.

Remember that your NPC is entitled to see what you have recorded, so be prepared to justify your comments and to take care with the way you word the points you make.

### The Triangulation Visit Checklist

<b>Country:</b>	<b>NPC:</b>	
<b>Date of TV:</b>	<b>Triangulation Visitor:</b>	
<b>Lesson Observation</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... have a copy of the teacher’s Lesson Plan?		
... agree with the teacher where s/he should be placed for observing the lesson?		
... observe the lesson and make notes as required?		
... remain unobtrusive throughout the lesson?		
... take an active part in the lesson?		
<b>Teacher Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... put the teacher at ease before the interview began?		
... request permission to record the interview?		
... keep to time without “clock watching”?		

... allow the teacher to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the teacher for contributing to the iTEC project?		
<b>Student Group Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... check with the teacher that all relevant permissions had been granted for recording the student interviews?		
... ask the students themselves if they were happy about being recorded?		
... introduce him/herself to the students at the beginning?		
... use name cards/identity labels so that the students could be addressed using their names?		
... keep to time without “clock watching”?		
... allow all the students to have an opportunity to answer at least one of the questions?		
... get through all the required questions?		
... thank the students for their contributions to the iTEC project?		
<b>Head Teacher Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... check that the Head Teacher was familiar with the requirements of the NPC visit and the role of the Triangulation Visitor before the interview		



began?		
... put the Head Teacher at ease before the interview began?		
... request permission to record the interview?		
... keep to time without “clock watching”?		
... allow the Head Teacher to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the Head Teacher for allowing the iTEC activities (particularly the TV which involves an “extra” visitor!) to take place in his/her school?		
<b>ICT Co-ordinator</b>		
<b>Did the NPC:</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... put the ICT Co-ordinator at ease before the interview began?		
... request permission to record the interview?		
... keep to time without “clock watching”?		
... allow the ICT Co-ordinator to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the ICT Co-ordinator for contributing to the iTEC project?		
<b>Other Data Collection Requirements</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... have all relevant documentation to carry out the data collection		

<p>activities?</p> <p><b>i.e. ...</b></p> <ul style="list-style-type: none"> <li>• Evaluation Handbook ?</li> <li>• All sets of Interview Questions?</li> <li>• Copy of the NPC Visit Schedule?</li> <li>• Evidence of Permissions (as required by their own country's legislation) to video/audio record students?</li> </ul>		
<p>... provide/arrange for a suitable interview room for their own interview?</p>		
<p>... have all relevant documents translated for the teachers?</p>		
<p>... have any evidence that s/he had encouraged/reminded the case study teacher to:</p> <ul style="list-style-type: none"> <li>• make use of the iTEC online Teacher Community site?</li> <li>• to write up their multimedia story (iMmS)?</li> <li>• to complete the online survey as soon as teaching with the iTEC Learning Story is finished?</li> </ul>		
<p>... remember to collect all relevant teacher documentation before leaving the school?</p> <p>(see Evaluation Handbook, 2.3.2.3.3 p45)</p>		

### 17. Section Three: Your own Checklist

Use the following checklist to make sure you carry out all the required Triangulation Visit activities.

Before your Visit		
Have you . . .	YES/NO	Notes
... made contact with your NPC?		
... agreed time and location for your Triangulation Visit?		
... booked travel and accommodation?		
... received a copy of the NPC visit schedule?		
<p>... worked out and agreed with your NPC, the timetable for all your required TV activities over the 2 days?</p> <p>The essentials are:</p> <p>1 Lesson Observation</p> <p>4 Interviews (each approx. 30mins)</p> <p>1 NPC Interview (approx. 1hour)</p>		
<p>... read all the relevant documents:</p> <ul style="list-style-type: none"> <li>• Evaluation Handbook (pp31-55)?</li> <li>• The Visitor's Guide for TVs?</li> <li>• Triangulation Visit Checklist?</li> <li>• NPC's Case Study Visit schedule?</li> <li>• NPC the Interview schedule?</li> <li>• NPC Interview Record Sheet?</li> </ul> <p><b>NB:</b></p> <p><b>1. Make sure you have electronic and hard copies of these documents on your visit.</b></p> <p><b>2. Remember to pack your digital recording device/s for the interviews and/or videos/photographs.</b></p>		
During your Visit		

Did you . . .	YES/NO	Notes
... carry out observations of the NPC : <ul style="list-style-type: none"> <li>• observing a case study teacher teaching an iTEC lesson?</li> <li>• conducting interviews with :               <ul style="list-style-type: none"> <li>- the observed teacher?</li> <li>- a group of students from the observed lesson?</li> <li>- the ICT Co-ordinator?</li> <li>- the Head Teacher?</li> </ul> </li> </ul>		
... complete your TV Checklist?		
... conduct the NPC Interview?		
... put the NPC at ease before the interview began?		
... request permission to record the interview?		
... keep to time without “clock watching”?		
... allow the NPC to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the NPC for contributing to the iTEC project?		
... share your Checklist notes with the NPC?		
... thank the school colleagues before leaving?		
<b>After your visit</b>		
<p><b>Within <u>one week</u> of the NPC interview:</b></p> <p><input type="checkbox"/> send a first draft of your completed NPC Interview Record Sheet to the NPC interviewed in order to allow the NPC to check that s/he agrees with what you have recorded (and to make amendments/adjustments if necessary).</p> <p><b>NB:</b> Please be sure to ask the NPC to deal with this <b>as quickly as possible</b> so that you can return the jointly agreed document to WP5 within two weeks of the interview</p>		

date.

**Within two weeks of your TV**, please send (as email attachments):

- a copy of the NPC's Case Study Visit Schedule
- your **completed** Triangulation Visit Checklist
- your **completed (and jointly agreed)** NPC Interview Record Sheet
- the audio recording of the NPC Interview
- any accompanying video clips or photographs (for which you have acquired the relevant permissions)

... to: **Maureen Haldane** ([m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk))

## 8.6. Triangulation Visit Guidance: Cycle 2

### 18. Introduction

This set of guidelines is provided for colleagues who will be carrying out Triangulation Visits (TVs) on behalf of the iTEC Evaluation Team (WP5).

The guidance in this document is presented in the form of:

- a set of notes addressed to the colleague carrying out the TV<sup>24</sup> (that's you!);
- a set of questions (that you, the Visitor, might ask) with answers that explain the requirements of the visit.

During the lifetime of the project, **each country will receive a one-day Triangulation Visit** by a member of WP5 or a nominated colleague who speaks the language of the country being visited. It is anticipated that just one day will be required to observe the National Pedagogical Co-ordinator's (NPC's) data collection activities ([see p3](#)) in one school. However, you may find that, for practical scheduling reasons, one or two of the participant interviews to be conducted by the NPC have been scheduled over two days.

The purposes of the visit are:

- to observe the NPC's (or their appointed colleague's) case study data collection procedures;
- to ensure adherence to the case study data collection protocols as described in the iTEC Evaluation Guidance Handbook: Cycle 2 (Section 5; pp 28-34);
- to strive for consistency of data collection procedures across the iTEC countries;

The following documents relate to the Triangulation Visits and are available on-line at:

- a. Triangulation Visit Checklist (available online)
- b. the iTEC Evaluation Guidance Handbook: Cycle 2 (available online)
- c. the NPC's Case Study Visit Schedule (provided by the NPC, preferably **before** your visit)

The above documents are also available to National Pedagogical Co-ordinators.

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<sup>24</sup> In order to avoid too much repetition and for ease of reference the colleague carrying out the Triangulation Visit will be referred to as the TVisitor.

TV guidance is presented below under the following headings:

1. [Preparation for the visit](#)
2. [During the visit](#)
3. [After the visit](#)

## 19. Preparation for the visit

### 1. *When do the Triangulation Visits take place?*

Triangulation Visits are timed to coincide with an NPC's case study data collection activities. These will be taking place towards the end of an iTEC Cycle and at a time when a case study teacher will be implementing an iTEC Learning Story.

### 2. *Who arranges the Triangulation Visits?*

The visits are arranged as follows:

1. In the first instance, WP5 Leaders will:
  - a. contact the NPCs who are selected to receive a TV;
  - b. send relevant documents to the NPCs and to you, the Triangulation Visitor.
2. You and the NPC will then need to liaise (please cc all correspondence to [m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk)) in order to:
  - a. agree and arrange the Triangulation Visit<sup>25</sup> (one full day with the NPC<sup>26</sup>) and to request a copy of the case study visit **schedule** that the NPC has agreed with the case study teacher (see Evaluation Guidance Handbook: Cycle 2, Boxed Note 2, p.30. Remember that this note in the Handbook is addressed to the NPC);

**NB:** Please check the NPC's schedule carefully to ensure that all the data collection activities (see extract below which is taken from the Evaluation Guidance Handbook: Cycle 2) will be taking place on the day of your TVisit to the school.

(This extract is addressed to the NPC in the Evaluation Handbook)

"In each Cycle, when you [NPC] visit each of your three case study teachers, you will be carrying out the following activities:

- one observation of one iTEC lesson being taught by the case study teacher;

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<sup>25</sup> **Note:** Travel and subsistence will be met by WP5




<sup>26</sup> **Note:** 2 one full day with the NPC PLUS travel either side of these days if necessary.

- four interviews
  - the case study teacher whose lesson you observed
  - a small group of students who participated in the observed lesson
  - the Head Teacher (HT)
  - the ICT Co-ordinator (ICTC)
- Collection of case study teacher's documentation"

**Evaluation Guidance Handbook: Cycle 2 (p29)**

- b. Make arrangements for meeting up with the NPC. The NPC may also be able to advise on accommodation.
3. You are required to keep WP5 Leaders informed of all agreed TV activity. Copying-in to emails is probably the easiest way to do this. Please cc: Maureen Haldane ([m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk)) into all correspondence related to TVs.

### 3. What else do I need to do?

1.  In preparation for your visit, you will need to **read the Evaluation Guidance Handbook: Cycle 2** and be very familiar with what the NPC is required to do whilst carrying out data collection activities. Although **it is advisable to read the whole of the document, the most important parts are:**
  - **Section 5: Guidance on the NPC Visit to the Case Study Teachers (pp28-34)**
  - **Section 6: Interview Guidance and Schedules (pp41-47)**
2.  You will also need to **read through the Triangulation Visit Checklist** and make yourself familiar with the "Guidance for Observing" at the beginning.
3.  Ensure that you have the following documents with you (either hard copy or electronically, but bear in mind that you will be required to provide your findings to WP5 Leaders electronically):
  - a. Evaluation Guidance Handbook: Cycle 2
  - b. The Visitor's Guide for Triangulation Visits (ie: this document)
  - c. Triangulation Visit Checklist
  - d. NPC's Case Study Visit Schedule (sent to you by the NPC)



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## 20. During the visit

On the day of your school visit, you will be **observing the NPC's data collection activities** which include:

- The NPC observing one full iTEC lesson being taught by the case study teacher;
- An interview with the case study teacher whose lesson the NPC observed;
- An interview with a small group of students who participated in the observed lesson;
- An interview with the Head Teacher (HT);
- An interview with the ICT Co-ordinator (ICTC) if involved in supporting iTEC teacher/s;
- NPC's collection of the case study teacher's documentation.

The following points provide important information about what to do during your school visit:

1. If possible, it is preferable to arrive at the School Reception either with, or at the same time as your NPC who will then be able to make the introductions to relevant school colleagues and to the case study teacher in particular.
2. The NPC and/or the case study teacher will be your host/s whilst in school unless the school requires otherwise.
3. As the main purpose of your TVisit is to observe the NPC's data collection procedures, the NPC's case study visit schedule will provide you with the structure of your visit. For information about the NPC's schedule; see: (boxed) "Notes for your attention" nos: 1-5, p30 of the Evaluation Guidance Handbook: Cycle 2.
4. Whilst observing the case study teacher's lesson and the interviews, you will need to:
  - a. use the TV Checklist\* provided;
  - b. ensure that you are adhering to the "Guidance for Observing".

**\*Guidance on how to use the checklist is contained within the TV Checklist itself.**
5. The NPC may also request some of your time to engage in discussions about their data collection practice, after all, the NPC's practice has been the focus of your observations! However, please be aware of this **cautionary note . . .**

*Giving feedback is not something to be undertaken lightly and only colleagues who are qualified and experienced should agree to a formal feedback session. However, it is acceptable for you to share your checklist*

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*notes and to allow the NPC to add any points that will clarify, exemplify or amplify the points you have made.*

## **You may need to be in school for Two Days . . .**

There may be a need to be in the school for a **second day** for two reasons . . .

### **1. . . . if all interviews have not been completed on the first day**

When the NPC and the case study teacher are organising the schedule for the NPC's data collection visit, they will be conscious of the need to schedule the activities so as to avoid disruption to the smooth running of the school day. For this reason, it may not be possible to complete all the interviews in one day and therefore, **you may need to visit the school again for a second day**. If this occurs, you are sure to have some spare time between your formal Triangulation Visit tasks and you may be offered opportunities to make use of this time by taking a more general interest in the iTEC school.

Do feel free to take up this offer, but please **make some general notes about what you discover** as this will be useful to the Evaluation Team.

### **2. . . . if there is more than one Case Study teacher at the school**

It is possible that certain schools may be contributing more than one case study from the school you are visiting and while on the premises, **the NPC may have a second Case Study teacher to observe and two subsequent interviews to conduct** (one with the observed teacher and one with the group of students from the observed lesson). If this situation arises, you are free to make one of three decisions:

1. If invited by the NPC and teacher, and if scheduling permits, take a **formal** interest and **complete a second set of Case Study data collection observations** (observing a lesson observation plus the two subsequent interviews in the same way as you did for the first Case Study). This would be great news for the Evaluation Team!
2. If invited by the NPC and teacher, but scheduling doesn't allow you to undertake a complete set of data collection activities involving this teacher, take an **informal** interest in observing any combination of the NPC's three related data collection activities. **Complete the relevant sets of observation notes for the activities you are able to observe**, but state somewhere on the notes that you were unable to observe the full set of data collection activities related to this particular teacher.

3. With permission from the school and NPC, take a more **general interest** in the iTEC school; meeting other iTEC teachers, meeting students etc. **Make some general notes about what you discover** as this will be useful to the Evaluation Team.

### To summarise what may happen if a second day is required . . .

. . . if your TVisit requires you to stay for a second day, the following activities are possible on Day Two:

- Activity 1 There may still be one or two of the NPC's required interviews still to observe.
- Activity 2 The NPC may invite you to observe data collection activities related to a second Case Study teacher teaching an iTEC lesson in the same school. This is a wonderful opportunity and may be undertaken, schedule permitting, on either a **formal** or **informal** basis.
- Activity 3 You may be invited to meet with other iTEC teachers and/or students at the school. This will be an **informal** activity and **can only be one of your Day Two activities alongside either Activity 1 or Activity 2 above, ie this activity cannot be undertaken as a sole Day Two task.**
- Activity 4 The NPC may ask for some time to be put aside to enable him/her to receive feedback on their data collection activities. This activity **can only be one of your Day Two activities alongside either Activity 1 or Activity 2 above, ie this activity cannot be undertaken as a sole Day Two task.**

## 21. After the visit

### Within two weeks of the TV:

Please send (as email attachments):

- a copy of the NPC's Case Study Visit Schedule
- your **completed** Triangulation Visit Checklist
- any accompanying video clips or photographs (for which you have acquired the relevant permissions)

. . . to: Maureen Haldane ([m.j.haldane@mmu.ac.uk](mailto:m.j.haldane@mmu.ac.uk))

*May we wish you a happy and successful Triangulation Visit!*

## 8.7. Triangulation Visit Checklist: Cycle 2

### 22. Introduction

This document relates specifically to the following three purposes of your Triangulation Visit:

1. to observe the NPC's (or their appointed colleague's) case study data collection procedures;
2. to ensure adherence to the case study data collection protocols as described in the **iTEC Evaluation Guidance Handbook: Cycle 2** (Section 5: pp28-34);
3. to strive for consistency of data collection procedures across the iTEC countries.

On your Triangulation Visit, much of your time will be spent observing the NPC collecting evaluation data.

This Checklist is presented in the following three sections:

- **Section One:** this provides you with a set of Observation Guidelines.
- **Section Two:** this provides you with a checklist for you to record your comments about the NPC's data collection procedures. Your comments need only to be very brief, but remember that Purpose 3 is to strive for consistency of data collection procedures. **It is vital, therefore, that you are very familiar with the Evaluation Guidance Handbook, particularly Section 5: pp28-34, in order to complete this Checklist fairly.**
- **Section Three:** this provides you with your own visit checklist to help you ensure that you have completed all the required TV activities.

Please note: both Sections Two and Three of this document need to be completed.

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### 23. Section One: Observation Guidelines

#### Observing the NPC in the classroom

You will be observing the NPC whilst s/he is involved in observation of a whole lesson.

Your focus will be on the NPC's observation activity and not specifically on the lesson.

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You will be making brief notes about the NPC's data collection activity in the Checklist provided below

**Before the lesson, you will need to:**

- check with the teacher where s/he would like you to be placed for "observing the observer";
- provide assurances to the teacher being observed that you are focused on observing the process being put in place by the NPC and that **you are not there to assess the teacher**. Remember that even the most confident teachers can feel nervous when being observed and trying something new, particularly when there is more than one visitor in the classroom;
- decide (**if you have agreed with the teacher and NPC that you can take photographs or video recordings**) where it is best to place your video recorder and/or tripod (think batteries and/or sockets . . . you may need an extension lead!);
- ensure that any photographing or recording is not intrusive and does not in any way interrupt the lesson.

**NB:** It is essential for you to check that permissions are in place for all the children in the class if you are photographing and/or recording.

**During the lesson, you will need to:**

- make notes (in the Checklist below) on the NPC's observation procedures;
- remain focused on "observing the observer";
- **discreetly** take photographs or video recordings.

**Observing the NPC carrying out Interviews**

You will be observing four interviews that will take place between the NPC and . . .

- the case study teacher whose lesson you observed
- a small group of students who participated in the observed lesson
- the Head Teacher (HT)
- the school's ICT Co-ordinator (ICTC) if this person has been involved in supporting the iTEC teacher/s

For Interview Guidance that is offered to NPCs and for the Interview Schedules, see: Evaluation Guidance Handbook: Cycle 2, Section 6: pp41-47

**During the interviews you will need to:**

- sit apart from the interviewer and the interviewees;
- be as unobtrusive as possible;

- avoid being drawn into any discussion and avoid NVC<sup>27</sup> responses (particularly important in the student group interview);
- record comments in the TV Checklist below.

## 24. Section Two: Triangulation Visit Checklist

In the TV Checklist below, there are three columns; the first describes what the NPC is expected to be doing, the second requires a “Yes/No/Partly” response and the right-hand column allows you to provide brief notes to exemplify or amplify your “Yes/No/Partly” response.

Remember that your NPC is entitled to see what you have recorded, so be prepared to justify your comments and to take care with the way you word the points you make.

### The Triangulation Visit Checklist

<b>Country:</b>	<b>NPC:</b>	
<b>Date of TV:</b>	<b>Triangulation Visitor:</b>	
<b>Lesson Observation</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... have a copy of the teacher’s Lesson Plan?		
... agree with the teacher where s/he should be placed for observing the lesson?		
... observe the lesson and make notes as required?		
... remain unobtrusive throughout the lesson?		
... take an active part in the		

<sup>27</sup> NVC: non-verbal responses (ie facial expressions or any other “body language”)

lesson?		
<b>Teacher Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... put the teacher at ease before the interview began?		
... request permission to record the interview?		
... keep to time without “clock watching”?		
... allow the teacher to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the teacher for contributing to the iTEC project?		
<b>Student Group Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... check with the teacher that all relevant permissions had been granted for recording the student interviews?		
... ask the students themselves if they were happy about being recorded?		
... introduce him/herself to the students at the beginning?		
... use name cards/identity labels so that the students could be addressed using their names?		
... keep to time without “clock watching”?		
... allow all the students to have an opportunity to answer at least one of the questions?		

... get through all the required questions?		
... thank the students for their contributions to the iTEC project?		
<b>Head Teacher Interview</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... check that the Head Teacher was familiar with the requirements of the NPC visit and the role of the Triangulation Visitor before the interview began?		
... put the Head Teacher at ease before the interview began?		
... request permission to record the interview?		
... keep to time without "clock watching"?		
... allow the Head Teacher to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the Head Teacher for allowing the iTEC activities (particularly the TV which involves an "extra" visitor!) to take place in his/her school?		
<b>ICT Co-ordinator</b>		
<b>Did the NPC:</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
... put the ICT Co-ordinator at ease before the interview began?		
... request permission to record the interview?		
... keep to time without "clock watching"?		



... allow the ICT Co-ordinator to answer the questions fully without any interruptions?		
... get through all the required questions?		
... thank the ICT Co-ordinator for contributing to the iTEC project?		
<b>Other Data Collection Requirements</b>		
<b>Did the NPC . . .</b>	<b>YES/NO/Partly</b>	<b>Notes (exemplify or amplify)</b>
<p>... have all relevant documentation to carry out the data collection activities?</p> <p><b>i.e. . . .</b></p> <ul style="list-style-type: none"> <li>• Evaluation Handbook ?</li> <li>• All sets of Interview Questions?</li> <li>• Copy of the NPC Visit Schedule?</li> <li>• Evidence of Permissions (as required by their own country's legislation) to video/audio record students?</li> </ul>		
... provide/arrange for a suitable interview room for their own interview?		
... have all relevant documents translated for the teachers?		
<p>... have any evidence that s/he had encouraged/reminded the case study teacher to:</p> <ul style="list-style-type: none"> <li>• make use of the iTEC online Teacher Community site?</li> <li>• to write up their multimedia story (iMmS)?</li> <li>• to complete the online survey as soon as teaching with the iTEC Learning Story is finished?</li> </ul>		
<p>... remember to collect all relevant teacher documentation before leaving the school?</p> <p>(see Evaluation Guidance Handbook: Cycle 2, Section 5.1.2.3, p34)</p>		

## 25. Section Three: Your Own Checklist

Use the following checklist to make sure you carry out all the required Triangulation Visit activities.

Before your Visit		
Have you . . .	YES/NO	Notes
... made contact with your NPC?		
... agreed time and location for your Triangulation Visit?		
... booked travel and accommodation?		
... received a copy of the NPC visit schedule?		
<p>... worked out and agreed with your NPC, the timetable for all your required TV activities over the 2 days?</p> <p>The essentials are:</p> <p>1 Lesson Observation</p> <p>4 Interviews (each approx. 30mins)</p>		
<p>... read all the relevant documents:</p> <ul style="list-style-type: none"> <li>• Evaluation Guidance Handbook: C2 (Sect 5: pp28-34 &amp; Sect 6: pp41-47)?</li> <li>• The Visitor's Guide for TVs?</li> <li>• Triangulation Visit Checklist?</li> <li>• NPC's Case Study Visit schedule (obtained from the NPC)?</li> </ul> <p><b>NB:</b></p> <p><b>3. Make sure you have electronic and hard copies of these documents on your visit.</b></p> <p><b>4. Remember to pack your digital recording device/s for the interviews and/or videos/photographs.</b></p> <p><b>5. Make sure you have spare batteries with you.</b></p>		
During your Visit		
Did you . . .	YES/NO	Notes
... carry out observations of the NPC :		

<ul style="list-style-type: none"> <li>• observing a case study teacher teaching an iTEC lesson?</li> <li>• conducting interviews with : <ul style="list-style-type: none"> <li>- the observed teacher?</li> <li>- a group of students from the observed lesson?</li> <li>- the Head Teacher?</li> <li>- the ICT Co-ordinator?</li> </ul> </li> </ul>		
... carry out any <b>informal</b> observation/s?		
... complete your TV Checklist?		
... thank the NPC for contributing to the iTEC project?		
... thank the school colleagues before leaving?		
<b>After your visit</b>		
<p><b>Within <u>two weeks</u> of your TV, please send (as email attachments):</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> a copy of the NPC's Case Study Visit Schedule</li> <li><input type="checkbox"/> your <b>completed</b> Triangulation Visit Checklist</li> <li><input type="checkbox"/> a <b>completed</b> version of <b>this</b> Checklist (ie "Your Own Checklist")</li> <li><input type="checkbox"/> any accompanying video clips or photographs (for which you have acquired the relevant permissions)</li> </ul> <p>... to: <b>Maureen Haldane</b> (<a href="mailto:m.j.haldane@mmu.ac.uk">m.j.haldane@mmu.ac.uk</a>)</p>		

*Thank you for your help with this important  
Triangulation activity!*