iTEC

Designing the future classroom

D5.5 Evaluation Final Report

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Executive Summary

This deliverable presents the final evaluation report (full and summary versions), the Cycle 5 evaluation, and a brief report of other activities undertaken in period 4. During period 4, WP5 undertook the evaluation of Cycle 5, focusing on the potential for mainstreaming and upscaling the iTEC approach. Also, in response to the third periodic project review, greater attention was paid to capturing the views of students and school leaders.

During period 4, WP5 undertook a number of additional tasks and made changes to the focus of other activities in response to feedback from periodic reviews.

1. A number of case studies of the learning activity development process (known as Edukata) were conducted and additional feedback was gathered from National Pedagogical Coordinators (NPCs).
2. A student survey was introduced to provide further evidence of the perceived impact of the iTEC approach.
3. Changes to teacher survey questions and a focus on school leaders in the analysis of the case studies contribute to the shift in focus from classroom impact to strategic impact.
4. To evaluate the iTEC technologies, additional questions were introduced into the teacher survey.

As in cycle 4, the data collection requirements were reduced to enable NPCs to reallocate resources to new tasks (such as piloting Edukata).

In Cycle 5, pilot teachers were encouraged to use the iTEC Widget Store. NPCs were also asked to use the Composer and Scenario Development Environment (SDE) with teachers during Learning Activity workshop sessions. TeamUp and ReFlex (prototype widgets developed by Aalto) were also made available. The People & Events Directory was made available to iTEC teachers from all cycles as well as ‘experts’ associated with iTEC.

An additional task in period 4 was to synthesise the evaluation findings from all five cycles, resulting in a summary report and a full report.

These reports synthesise the evidence of the impact of iTEC on learners and teachers, and the potential of the iTEC approach for system change, looking at:

- iTEC processes, tools and resources (case studies, user/teacher surveys, focus groups);
- Classroom perspectives (case studies, teacher/learner surveys);
- National perspectives (case studies).

Five overlapping cycles of piloting were undertaken over the four years of the project (Cycles 1-5). These were supported at national level by coordinators who recruited teachers; provided training and facilitated online and face-to-face communities; and

collected evaluation data. In the first four cycles, packages of Learning Activities, exemplified through 2-4 Learning Stories, were created centrally and subsequently localized by national coordinators.

In the final cycle of the project, national coordinators took over ownership of the process and organised learning design locally, in order to foster sustainability. Over 300 people were involved in Future Classroom Scenario development workshops and over 400 people were involved in Learning Activity development workshops, the majority of whom in both cases were teachers. In addition, with central support, a small number of teachers created scenarios that were deliberately intended to be radical or disruptive. As iTEC prototype technologies became available, teachers were encouraged to incorporate them into their piloting activities.

Evaluation activities using a mix of instruments took place during all five cycles and regular reports were produced. The key findings identified in the summary and full evaluation reports, covering all cycles, are presented under three headings:

1: How did the iTEC approach impact on learners and learning?

2: How did iTEC impact on teachers and teaching?

3: What is the potential of iTEC for system-wide adoption in schools?

The introduction to this deliverable presents a reminder of the context, summarising the work undertaken during periods 1, 2, and 3 in section 1.1. It describes the work conducted during period 4 in section 1.2. In section **Error! Reference source not found.** it outlines the structure of the document. Finally, in section **Error! Reference source not found.** it presents an introduction to the Cycle 5 large-scale pilots.

The deliverable is then organised in three parts (A, B and C).

- Part A presents a summary of the evaluation, synthesising the findings from all five cycles
- Part B presents a full report of the evaluation findings, summarized across all five cycles.
- Part C reports on other activities conducted by WP5 during period 4, including support for National Coordinators, dissemination activities, engagement with librarians and reflection on lessons learned overall.

A full report of the Cycle 5 evaluation is included in Appendix 6.2 (Annex 3).

1 INTRODUCTION

Work Package 5 (WP5) is concerned with the evaluation of the large-scale piloting of selected scenarios in 2,500+ classrooms.

1.1 Reminder of the context

In the first year of the project, two deliverables were submitted and one deliverable was submitted in each of the second and third years of the project.

D5.1a is the Evaluation Plan, which presents the approach undertaken when evaluating each of first three cycles of validation in the iTEC project. 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) covers the period M1 to M12. The evaluation preparatory activities undertaken in this first year included the Evaluation Plan (D5.1, described above), the Cycle 1 Evaluation Handbook (Task 5.3) for the National Pedagogical Coordinators (NPCs) and a Knowledge Map (Task 5.1). The Evaluation Handbook describes the protocols and procedures to be followed and presents the research instruments, ensuring that a consistent approach to data collection was applied. It was subsequently revised prior to each cycle.

The second Evaluation Interim Report (D5.3) covers the period M13 to M24. It presents the final results of the evaluation of Cycle 1 and the interim results of the evaluation of Cycle 2 (Task 4.3).

The third Evaluation Interim Report (D.5.4) covers the period M25 to M36. It presents the final results of the evaluation of Cycle 3 and Cycle 4 together with other evaluation activities such as the report on national case studies (Task 4.3).

This report, Evaluation Final Report (D5.5) presents the evidence of the impact of iTEC on learning and teaching, evaluations of the iTEC processes, outputs and iTEC technologies, and evidence of the potential of iTEC for influencing policy and wide-scale practice. This evidence is presented as a summary report and a full report. D5.5 also includes a brief overview of supporting activities in the final year of the project together with the evaluation results for Cycle 5.

1.2 Purpose and scope of the task

This fifth deliverable, presenting the Final Evaluation Report provides a synthesis of the evaluation work undertaken over the five project cycles. It is guided by the Evaluation Plan (resubmitted, D5.1a) and draws on the work undertaken in the first three years of iTEC (D5.2, D5.3 and D5.4) and the evaluation of Cycle 5.

Firstly, one of the core tasks for period 4 (as documented in the DoW) was Task 5.4 Evaluation Cycle Five (M39-M45). This task involved the collection, analysis and reporting of data from the pilots. From Cycle 4 onwards, data collection at classroom level was reduced (from three to one case studies, the teacher questionnaire was also slimmed down) in order to accommodate the evaluation tasks, but also to ensure that NPCs were able to reallocate resources to participate fully in the piloting of the iTEC toolkits. The data collection instruments were were revised to capture more specific feedback on the iTEC tools and also to focus on the impact of iTEC and the potential for mainstreaming the iTEC approach.

The evaluation was refocused in the third year in response to the second periodic review and the need to evidence impact for exploitation purposes (section 4.1). The objectives of refocusing are:

- To capture and document the innovative iTEC processes which could support mainstreaming
- To shift the focus of evaluation from classroom impact to strategic impact
- To place greater emphasis on the evaluation of iTEC technologies

This work has been undertaken during the third and fourth years of the project. This deliverable reports on the activities completed during period four in relation to the refocusing of the evaluation in the following ways.

To capture and document the innovative iTEC processes which could support mainstreaming, a number of case studies of the Learning Activity development process were conducted and additional feedback was gathered from NPCs. Furthermore, a, student survey was introduced to provide further evidence of the impact of the iTEC approach.

Changes to teacher survey questions and a focus on school leaders in the analysis of the case studies contribute to the shift in focus from classroom impact to strategic impact.

To evaluate the iTEC technologies, additional questions were introduced into the teacher survey; a separate People & Events survey was conducted; technology focus groups were carried out by NPCs; questions on the use of the Composer (or SDE) were included in the learning activity case studies; and data was collected from NTCs via a focus group on the Composer and a set of questions on the implementation of the Widget Store. In addition, WP10 led on the evaluation of the SDE, including an email survey for teachers.

The key findings identified in the summary and full evaluation reports, covering all cycles, are presented under three headings:

1: How did the iTEC approach impact on learners and learning?

2: How did iTEC impact on teachers and teaching?

3: What is the potential of iTEC for system-wide adoption in schools?

Two key documents are included as part of this deliverable in addition to this report of activities conducted during period 4:

- Creating the Future Classroom: Evidence from the iTEC Project (Summary)
- Creating the Future Classroom: Evidence from the iTEC Project (Full report)

In addition, Internal report five: Report on the fifth iTEC cycle is provided in the appendices.

The summary report has been printed in English (print run of 2000 copies) and distributed to interested partners. The summary report has also been translated in to 12 different languages (Danish, Estonian, Finnish, Flemish, French, German, Hungarian, Italian, Lithuanian, Norwegian, Spanish, Turkish) and made available in pdf. Print ready versions are also available if partners wish to print hard copies in their own language.

The full report as submitted is a draft version. Prior to public distribution it will undergo a design process to ensure that it has a similar look and feel to the summary report and includes the same infographics. This will be undertaken in-house at MMU but has not yet been completed in case there is a need to make any final revisions following internal and external review processes.

This document also refers to the following key internal deliverables which are accessible via

http://itec.eun.org/web/guest/deliverables.

- Evaluation Handbook, CYCLE 5

  This document outlines the procedures, protocols and data collection instruments for NPCs in Cycle 5.

Work Package 5 partners and their contributions to all activities throughout the year are summarized in Appendix 1 (section 6.1).

1.3 Structure of the document

The report comprises three main parts, A (section 2), B (section 3), and C (section 4) and three appendices.

Part A (section 2) presents a summary of the evaluation findings across all 5 cycles:

Part B (section 3) of this report presents the final report, synthesising the evaluation findings for the 5 cycles.

Part C (section 4) reports on other activities conducted by WP5 during period 4, including support for National Coordinators, dissemination activities, engagement with librarians and reflection on lessons learned overall.

Section 4.1 describes the focus of the evaluation during Cycle 5.

Section 4.2 outlines the procedures adopted to support National Pedagogical Coordinators to undertake data collection on behalf of WP5 during Cycle 5.

Section 4.3 describes the approach taken to data analysis during Cycle 5.

Section 4.4 outlines the dissemination activities related to the evaluation results that have taken place during M37-M48 and those planned beyond the project end date. This includes conference presentations, webinars, documents made available on the iTEC website, and journal articles submitted and in preparation.

Section 4.5 describes activities undertaken to adapt aspects of the iTEC process for librarians and responses received to these activities.

Finally, section 4.6 summarises the lessons learned.

2 PART A: FINAL REPORT (SUMMARY)

See Annex 1.

3 FINAL REPORT (FULL REPORT)

See Annex 2. Please note that the current version is a draft, awaiting the design process at MMU to be completed. Once the final version is available it will be forwarded.

4 PART B: SUPPORTING ACTIVITIES IN WP5

4.1 Refocusing the evaluation

Following feedback from the second project review and the subsequent revision of the Exploitation Plan (D11.5.2, Ellis, 2013), the project adapted the evaluation plan in the latter stages of the project in order to provide more evidence related to how the iTEC processes had the potential to be exploited and up-scaled.

The rationale for this refocus was:

- To capture and document the innovative iTEC processes which could support mainstreaming
- To shift the focus of evaluation from classroom impact to strategic impact

From Cycle 4 onwards, classroom impact has continued to be evaluated but on a smaller scale as the evidence from Cycles 1-3 was substantial, positive and confirmatory. The number of case studies conducted each cycle has been reduced from three per country to one per country. In Cycle 5, NPCs were requested to ensure that teachers selected for case studies are using iTEC technologies and nationally developed scenarios. They were also given the option of conducting a case study of the learning activity development process instead of a case study focussed on a pilot teacher. This resulted in additional data being captured on the iTEC process.

The teacher survey has been reduced in length. Moreover, the focus of the case studies and survey has been refined to more explicitly identify what teachers feel is innovative about iTEC (in relation to pedagogy and technology); the perceived potential for further uptake and teachers' perceptions of the iTEC technologies. One aspect of the impact of iTEC noted to be weak in previous cycles was limited direct feedback from students. Therefore, in Cycle 5, a student survey was devised to collect further evidence of the impact of iTEC on students.

As the iTEC project has progressed, there has been an increase in the iTEC technologies that have been introduced to teachers during piloting. Although developed as proof of concept, it is important to capture teacher perceptions about the potential of these innovative ideas. Therefore, a greater focus has been placed on gathering data from teachers about the use of iTEC technologies in Cycle 4 and Cycle 5. This has been achieved through the introduction of a number of additional evaluation activities, including a technology focus group with teachers in each country (conducted by NPCs); additional surveys for specific technologies; and gathering feedback from national technical co-ordinators (NTCs).

4.2 Supporting National Pedagogical Co-ordinators in Cycle 5

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.

As in previous cycles, in addition to the workshops outlined below NPCs also sought help and guidance during Cycle 5 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.

NPCs were provided with revised evaluation guidance for Cycle 5, ('Cycle 5 Evaluation Guide') and a one-hour briefing session on November 12th 2013. This outlined the evaluation activities planned for Cycle 5, focusing on the new activities for this cycle: the option to undertake an Edukata case study; the introduction of a student survey; and additional activities to evaluation iTEC technologies (including NTC involvement). As in Cycle 4, NPCs were encouraged to focus on the potential of iTEC technologies rather than the bugs/usability issues likely to be present due to prototype status. WP5 offered to send the teacher survey link directly to teachers for those who so wished, but the majority of NPCs said they preferred to send the link directly to teachers in the hope that this would improve response rates.

The Evaluation Guide was revised slightly in light of the feedback from NPCs and circulated to all NPCs. NPCs were also reminded that they could ask questions at any time.

4.3 Collecting and analysing the data

NPCs collected evaluation data in Cycle 5, using the documentation provided by WP5 (see section 4.2 above):

- They supported administration of two online surveys through providing teacher email addresses and/or sending emails directly to teachers and encouraging their teachers to respond:
    - Teacher Questionnaire (on the experience of piloting the chosen Learning Story, in Cycle 5 focusing more heavily on perceptions of the potential for scaling up the iTEC approach and the iTEC technologies, rather than impact on pedagogical practices)
    - Student Questionnaire (focused on perceived impacts on students' motivation, achievement and 21st century skills)
- They ran a focus group to capture teacher perceptions of iTEC technologies
- They conducted one case study in Cycle 5. This could be either:
    - A pilot case study involving lesson observation; interview with classroom teacher; group interview with 6-8 students; interview with head teacher; interview with ICT co-ordinator (if applicable)

- Or an Edukata case study involving workshop facilitator questionnaire, group interview with workshop participants, and follow up interviews with 2-4 teachers or other stakeholders.

As in Cycle 4, there was no longer a requirement for NPCs to write case study reports (just provide raw data). NPCs arranged for transcription and translation of all data collected in relation to the single case study they were asked to conduct.

The Associate Partners (from the Czech Republic and Finland) were not obliged to undertake case studies. The Czech Republic completed a partial Edukata case study (facilitator questionnaire) and Finland supplied contact details for teachers allowing WP5 to carry out follow up Edukata case study interviews. The industry partners (SMART and Promethean) were also not obliged to undertake case studies. SMART chose to undertake an Edukata case study.

As in previous cycles, qualitative data were coded using a framework derived from combining Kozma's conceptual framework for the SITES-M2 study, student-centred pedagogical strategies, enablers including a range of digital tools, usability, sustainability/transferability/scalability and the piloting process (including support, benefits and shortcomings).Also as in previous cycles, the qualitative data varied considerably in terms of levels of detail and the richness of the data.

4.3.1Cycle 5 overview

Cycle 5 was undertaken between November 2013 and June 2014.

17 countries participated in Cycle 5. As in previous cycles, in some countries only a very small number of teachers participated. Overall, NPCs reported that 439 pilots were implemented. 259 teachers responded to the survey a response rate overall of 67%. Eleven countries participated fully in case study data collection (3 Edukata and 8 pilot case studies).

As in previous cycles, the majority of respondents were experienced and ICT competent teachers; 70% of them were also involved in other initiatives, indicating their positive attitude towards technology and innovation.

There were four evaluation questions in Cycle 5, assessing the extent to which iTEC LSs, LAs and technologies **benefited teaching and learning** and **were sustainable and scalable** and **fit for purpose,** and assessing the **barriers and enablers to implementation**[1].

[1] The fifth evaluation question, evaluating the piloting process itself is reported on in D4.4 produced by WP4.

4.4 Dissemination activities

During period 4 a number of dissemination activities have taken place in relation to WP5.

Published articles

McNicol, S., Lewin, C., Keune, A., and Toikkanen, T., "Facilitating Student Reflection through Digital Technologies in the iTEC Project: Pedagogically-Led Change in the Classroom", Learning and Collaboration Technologies. Technology-Rich Environments for Learning and Collaboration *Lecture Notes in Computer Science* 8524, 2014, pp 297-308.

McNicol, Sarah (2014) "Modelling information literacy for classrooms of the future", *Journal of Librarianship and Information Science*, doi: 10.1177/0961000614526612

McNicol, S., Brekke, S.O., Nesse, V., Tokheim, J.I., and Berge, O. (2014). "Accuracy, uncertainty and new technologies". *Mathematics Teaching* 239, pp. 47-9.

McNicol, Sarah (2013), "InFlow (Information Flow): An Integrated Model of Applied Information Literacy", *School Libraries in View*, 36 (Winter).

Forthcoming articles

Lewin, C., and McNicol, S. (2014). "Supporting the development of 21st century skills through ICT", *Conference proceedings KEYCIT (Key Competencies in Informatics and ICT),* Potsdam, July 2014

McNicol, S. and Shields, E. (2014?)."Developing a new approach to information literacy learning design". *Journal of Information Literacy*

McNicol, S. (2015), "InFlow (Information Flow): An Integrated Model of Applied Information Literacy", *School Libraries Monthly*

Presentations

Sustaining innovation in the classroom: The iTEC process, European Conference on Educational Research, Bahçeşehir University, Istanbul, Turkey, September 2013 (Cathy Lewin)

Supporting teachers to develop their pedagogical practices using technology, Lancaster University, Department of Educational Research, November 2013 (Sue Cranmer, Cathy Lewin)

InFlow (Information Flow): An Integrated Model of Applied Information Literacy, LILAC Conference (Librarians' Information Literacy Annual Conference), Sheffield, UK (April 2014).

Facilitating student reflection through digital technologies in the iTEC project: pedagogically-led change in the classroom, 1st International Conference on Learning and Collaboration Technologies, Crete, June 2014 (Sarah McNicol).

Supporting the development of 21st century skills through ICT, KEYCIT (Key Competencies in Informatics and ICT), Potsdam, July 2014 (Cathy Lewin and Sarah McNicol).

InFlow (Information Flow): An Integrated Model of Applied Information Literacy, IFLA Information Literacy Satellite Conference, Limerick, Ireland, August 2014 (Sarah McNicol)

In addition, two UK training sessions have been run and two UK regional 'teachmeets' attended in relation to work with librarians reported in 4.5 below.

A number of journal articles and book chapters are in preparation:

Table 1: Journal articles in preparation

Provisional title	Authors	Target journal	Date submitted/plan to submit
Two chapters for the iTEC book: Large scale validation and Lessons learned, recommendations, and practice.	Cathy Lewin and Sarah McNicol	Re-engineering the uptake of ICT in schools	October 2014
Recrafting formal education: shifting the boundaries of formal and informal learning	Christine Greenhow and Cathy Lewin	Learning, Media and Technology	October 2014
New pedagogies: switches between roles and changes to roles.	Sarah McNicol and Adam Wood	Hybrid Pedagogy	October 2014
Innovation in the classroom: The role of the iTEC process	Sue Cranmer and Cathy Lewin	Computers & Education	November 2014
Promoting creativity through technology: teacher and learner experiences	Cathy Lewin	Thinking skills and Creativity	December 2014
Embedding technology to support the development of 21st century skills	Cathy Lewin and Sarah McNicol	Journal of Computer Assisted Learning	January 2014

Putting the learner in the driving seat: the impact of iTEC on the learning experience	Cathy Lewin	British Journal of Educational Technology	February 2015

4.5 Engagement with librarians

During Cycle 5, work has been undertaken to develop, test (on a small scale) and disseminate an information literacy model which draws on iTEC learning activities and the evaluation findings. A review comparing the types of teaching and learning activities encouraged in iTEC (and reported in the evaluation) with those supported by a number of the most commonly-used existing information literacy models suggested the need for a new model. The initial basis for the InFlow (Information Flow) model was the Cycle 4 Learning Activities devised by Aalto University (WP3), reinterpreted to focus on the key elements of information literacy. This model has been continuously developed and refined based on feedback from librarians from schools, colleagues and universities in the UK. A copy is available at http://www.esri.mmu.ac.uk/resstaff/inflowmodel.pdf

InFlow differs from existing information literacy models in a number of ways. It is designed to be engaging for students and to support student-centred and individualised learning. It is focussed on supporting authentic learning experiences which prepare students for future life and the workplace, and on the production of creative, tangible outputs. Students are encouraged to use a wide range of information sources and collaboration and reflection are key features. The model is adaptable for different ages and different educational sectors. It is designed as a highly flexible process which flows naturally from one element to the next, rather than a set of isolated tasks.

During 2014, the model has been introduced to librarians from schools, FE and HE at a number of workshops and 'teach meets' in the UK. It was also presented at LILAC (the main UK information literacy conference) and at an IFLA (International Federation of Library Associations and Institutions) information literacy conference in Ireland (as reported above).

Initial feedback on the model has been highly promising. Librarians feel that it offers them greater flexibility and freedom when developing information literacy programmes in comparison to other models. They also believe that it provides a more strategic approach which allows them to revise and improve their existing sessions, as well as design new learning activities. The fact that the model is simple is seen as another positive feature; it is an approach which could be used by students to plan their own research and projects as well as by librarians.

To date, as might be expected, use of the model has been fairly small scale, but has occurred in both schools and HE, including successful use in undergraduate teaching at MMU and in a number of school libraries in the UK. Examples of usage have been written up as case studies for inclusion in the forthcoming publications above.

In addition to the English document, French and Spanish versions of InFlow have been produced. Karine Aillerie (CNDP) produced the French translation and is promoting the model through her networks in France. The Spanish version has been shared with contacts in Spain (including SMART and ALFARED network) and Chile.

Areas for future research and investigation include:

- Wider scale implementation and evaluation (including internationally)
- Possibilities for introducing the model at a whole school level (several schools have expressed an interest in this possibility as the model is based on activities designed for teachers and avoids library jargon)
- Investigating the use of InFlow to support transition between educational stages (it is unusual in being a model which can be applied across different settings) and as a tool to support students in planning independent research activities.

4.6 Lessons learned and looking forward

Evaluation timescales have been extremely tight, especially during Cycle 5 when data were still being collected just six weeks before the final report submission deadline. Furthermore, the fact that piloting cycles overlapped has been problematic. For example, before Cycle 1 had been evaluated, Cycle 2 was at its midpoint and Cycle 3 had already begun. While WP5 have tried to provide formative data to other WPs, for example, supplying early drafts or raw data, the extent to which the evaluation findings were able to input into the development of the project was more limited than might otherwise have been the case.

As with most evaluations, resource constraints were an issue. As the project developed, the number of themes and issues which needed to be covered in the evaluation extended, meaning additional tasks had to be added which had not been anticipated at the start of the project. While we have tried to be as flexible as possible, it was not possible to do evaluate all aspects of this complex project as thoroughly as we would have liked to.

A further tension was the need to evaluate both project processes and outcomes. Again, resource constraints meant at certain points, strategic decisions needed to be made about where resources would best be focused.

The timing of the development of the various iTEC tools and technologies also presented evaluation challenges. The majority of the tools, and the toolkits, were only introduced in the final two cycles. This meant there was limited opportunity to gather data and it was not possible to focus on each tool in the depth which might have been possible had they been introduced into the project more gradually.

Naturally in a project involving such a large number of countries, language barriers presented challenges to the evaluation. This limited the amount of qualitative data which MMU researchers were able to collect directly. The approach used was to

support NPCs in conducting qualitative evaluation activities in the national language in each country. This produced highly mixed results; while some countries supplied detailed, high quality case studies, many NPCs clearly struggled with this task, especially in earlier cycles. This situation may have been improved by including research experience as one of the selection criteria for NPCs to ensure they had the necessary skills and knowledge to collect the data required for the evaluation. An alternative approach would have been to redirect resources away from supporting NPCs in data collection and instead for MMU researchers to conduct a smaller number of case studies each cycle (with the help of translators where necessary). This would have resulted in a smaller amount of data, but of considerably higher quality (the key factor with qualitative data).

Another language barrier has been in translating the open-ended survey responses, completed by teachers in their national language. In Cycles 1-4, Google Translate was used, but this was not an adequate solution as it frequently does not provide sufficiently meaningful or in-depth translations to allow the data to be coded accurately. In Cycle 5, an alternative approach was adopted: responses from a limited number of countries were translated by hand, providing more accurate translations which it was possible to code with much greater granularity (along with those responses in English from Finland and The Czech Republic). The remaining data were then transcribed using Google Translate and allocated to the codes established as far as was possible. This helped to act as a check that the themes emerging from a subset of countries matched those found in the wider data. Whilst focusing on data from a limited number of countries is not a perfect solution, this has allowed the open-ended survey responses to be analysed in a more robust way within the resource constraints of the project.

Throughout the project, the need to report data collected from such a diverse range of countries in a meaningful way has been a challenge. This has been exacerbated by the differences in sample sizes between countries in each cycle. In earlier cycles, WP5 gave into pressure to report data at a country level, even though there were concerns that this was not appropriate. As the project has progressed, we have become increasingly aware of the need to stress the limits of the data and to report it in ways which are less open to challenge, even if this means it is not possible to provide the level of detail other partners may wish for.

5 REFERENCES

Ellis, W. with Van Assche, F., Ayre, J., Wastiau, P. & Blamire, R. (2013). Exploitation Plan. Available at: http://itec.eun.org/web/guest/deliverables.

6 APPENDICES

6.1 Appendix 1: WP5 partners and their contributions during period 4

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).

Partners contributed in the following ways:

- Results from ID5.6 were presented by MMU at an iTEC webinar in November 2013.
- MMU, EUN, KM, UB, UVIGO, K.U.LEUVEN contributed to revising the questionnaires for Cycle 5.
- DGIDC, BMUKK, ITC, MONE, ANSAS, TLF, NCIE, MAKASH, ELFA, CNDP, EDUC, EDUB and SMART[2]
    - Translated teacher questionnaire amendments and the student questionnaire for Cycle 5
    - Collected evaluation data including one full case study (11)
    - Conducted a technology focus group with teachers (9)
    - Provided feedback on the Widget Store (4)
    - Provided additional feedback on the learning activity development process (10)
- Associate partners FNBE, DZS provided support for evaluation activities, including translating student questionnaire questions and facilitating partial Edukata case studies.
- Promethean[3] also provided support for evaluation activities, including feedback on Edukata.
- MMU provided support to NPCs to undertake evaluation including providing an Evaluation Handbook and running a webinar.
- MMU provided further individual support to NPCs as required through email and telephone/Skype contact.
- MMU analysed Cycle 5 data
- UVIGO conducted an online survey to evaluate the SDE.

[2] SMART are a partner in iTEC but were not allocated time in WP5.

[3] Promethean are a partner in iTEC but were not allocated time in WP5.

- A one day technical meeting was held in October 2013 with EUN, KM, UB, K.U.LEUVEN and MMU to discuss the use of prototype tools during Cycle 5, including their evaluation.
- MMU, EUN and AALTO developed the questions to evaluate the learning activity development toolkit.

6.2 Appendix 2: Internal deliverable 5.9 Cycle 5 Evaluation Report

Please see Annex 3.