

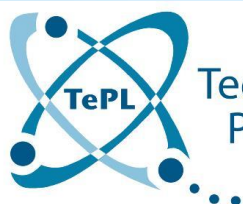
# THE TEPL INITIATIVE

JULY, 2016

---

*Innovative partnerships connecting  
educators across shared learning spaces*

---



Technology-enhanced  
Professional Learning

# ACKNOWLEDGEMENTS

We would like to take this opportunity to say a huge thank you to those of you involved in this initiative too numerous to mention individually but your pioneering work has been fundamental to what TePL is and will be in the future. Without your ideas, enthusiasm, and dedication the initiative would not have been possible. Our collaboration was trusting and motivating, creative and innovative as we established and shared ownership of TePL and created some outstanding examples of shared learning. We were fortunate enough to have several pioneers whose leadership provided others with the encouragement to explore and create in the Shared Learning Spaces. Thank you also to John Gunstone from the Scottish Government for financial advice, support and critique – very much appreciated. And thank you to all our partner schools (listed at the end of this report) and their dedicated teachers, School of Education staff, Development Officers, student teachers and most of all the pupils who continually inspire us all to push the boundaries of learning into new and unexplored realms.

Ramone Fowler  
TePL Project Manager  
On behalf of School of Education  
University of Aberdeen

# CONTENTS

## ACKNOWLEDGEMENTS

## EXECUTIVE SUMMARY

1. INTRODUCTION	3
2. ORGANISATION AND ADMINISTRATION	7
3. TECHNOLOGICAL INFRASTRUCTURE	11
4. THEMATIC LEARNING SPACES	17
5. RESEARCH	26
6 SUSTAINABILITY AND NEXT STEPS	34
7 DISSEMINATION AND RECOMMENDATIONS	39
8 APPENDICES	43

# EXECUTIVE SUMMARY

This final report follows the interim report of the TePL initiative funded by the Scottish Government and the University of Aberdeen (2012-2016). It focuses on phase 2 and 3 and presents recommendations for the sustainability and extension of *Shared Learning Spaces* networks regionally, nationally and internationally.



The overarching goal of the TePL initiative was to pioneer the co-construction of a dynamic network of teachers, teacher educators and researchers across multiple sites to develop the 'phenomenon' of shared learning; to explore new ways of working, articulating a vision for alternative pedagogies for learning, creating an ethos for working together across sites; and to identify how shared learning might be co-enacted in different sites with different participants. It was based on a paradigm shift of digitally-enabled and digitally-enhanced learning to connect a wider range of educators and provide a richer context to support learning in an equitable, participant-centred and sustainable way.

The report outlines the thematic approaches adopted, the technological challenges addressed, the pedagogic events to be promoted and disseminated and recommendations for further developments. It emphasises the need to set up an infrastructure which will support the organisation of the network, will enable practitioners to participate for professional and academic enrichment, will encourage pupils to extend the boundaries of their learning - all of which will be supported by evidence from classroom learning, participant enquiry and empirical research. The report contains guidance and recommendations drawn from careful analysis of lived experiences which set a challenging yet manageable pathway for further development and dissemination.

A handwritten signature in black ink, appearing to read 'De C...'. The signature is stylized and fluid.

**TePL Lead (Professor in Learning Innovation, University of Aberdeen)**

# 1. INTRODUCTION

The initial overarching goal of Technology-enhanced Professional Learning – TePL - was to pilot an innovative network of *Shared Learning Spaces* (SLs) connecting educators across Scotland and beyond. This report focuses on Phase 3 (ending December 2016), the successes and lessons we learned by uniting schools, teachers and their learners, student teachers, teacher educators, researchers and local authority staff in the Highlands, Aberdeenshire and Aberdeen City in *Shared Learning Spaces*. The evolution of *Shared Learning Spaces* supported through technology has contributed to a re-conceptualisation of professional and pupil learning across sites in new as well as familiar ways at many different levels. The different layers of the network are such that it is not possible in a short report to capture all of the activities that took place within this initiative. This report will instead provide an overview of some of the exciting and innovative connections we made, the many benefits that this new way of working has provided and make recommendations for extending this network of connected educators across Scotland and beyond.

## 1.0 DEVELOPMENTS SINCE THE INTERIM REPORT

This report sets out TePL developments covering the final stages of Phase Two (January 2015 - June 2015) and Phase Three (July 2015 – December 2015) of the TePL initiative.



Whilst initial proceedings for the TePL initiative started in July 2013, previous reports have documented the significant delays experienced due to complex processes involved in the pioneering installation of the technology in schools. Having worked through

these processes and carefully documented them to enable future installations to be more focussed and informed, the final report builds on and illustrates increasingly confident, creative and inclusive developments within the TePL network and across the *Shared Learning Spaces* in TePL schools and the University of Aberdeen.

In Phase One of the TePL initiative, four thematic teams were set up to experiment shared working between university and school sites. These are: *Creating Climates for Learning; Transitions for Expansive Learning; Learning How Others Learn; and Language, Literacies and Learning*. The themes are detailed in the Interim Report. During the final phase, as the TePL network extended to include more schools and universities themes transformed and developed. For example Northfield Academy, Aberdeen City, has captured very valuable perspectives of children moving from P7 to S1 through their participation in the **Transitions Theme** and critically reflected on these transitions with professionals in the TePL network. The school found their 'transitions experience' very useful and are keen to continue the partnership. Aberdeen City Council purchased mobile technology for Northfield Academy to enable teachers throughout the school to participate in the existing TePL network. The school hopes to engage in TePL by involving probationary

teachers in the many research opportunities that will develop as a result of this collaboration.

Uppsala University engaged in their first TePL link through participation in an Expansive Education seminar: Parental Engagement in Children's Learning. They found this experience to be very worthwhile and are working with the university team to establish more links between student teachers in the future. We have also established links with the University of Upper Austria, Oulu University of Applied Sciences; Mountain Park Elementary School, Georgia, USA and plan to further links between Danestone Primary, Middleton Park Primary and schools in China.

The introduction of *Shared Learning Spaces* has become an integral part of initial teacher education (ITE) in the University of Aberdeen and continued expansion and piloting new ideas will follow. Of particular strength are the links that have been established for the **Learning How Others Learn** course and the **Language, Literacies and Learning (3Ls) Theme**. An element of the **3Ls theme** focussed on the PGDE Modern Foreign Language (MFL) course. PGDE Secondary MFL students are required to accompany Secondary MFL teachers who are supporting MFL learning in the Primary sector. Prior to TePL it had been impossible, in the current one year



programme, to offer primary MFL placements alongside secondary MFL student teachers. The TePL initiative offered an alternative opportunity by engaging MFL student teachers in the specific 1+2 Languages Policy through TePL's *Shared Learning Spaces*. TePL enabled participants to take the first steps in creating (MFL) partnerships between the University and Primary school teaching staff and to address Donaldson's observation that 'effective collaboration (which) remains relatively rare' (Donaldson 2010, p.47)<sup>1</sup>. TePL provided student teachers with the opportunity to critically reflect on practice and participate as *agents for change* in shared digital classrooms. Student teachers participated in research regarding the impact on their professional practice, knowledge and skills. They reported gaining confidence from having the opportunity to deliver language lessons to primary and secondary pupils through the TePL space and are very keen to continue working through the shared learning concept for this purpose during their probationary school years.

Having the opportunity to pilot *Shared Learning Spaces* within different educational environments and for a wide variety of purposes has enabled us to gather data about ways of optimising the participants' experiences. Overall, participants identified

numerous examples of how TePL has and continues to transform their teaching practice. In Education Scotland's **Aspect Review** of the Education Authority and University ITE Partnership Arrangement (phase one) the team described TePL's *Shared Learning Spaces* as being unequivocally able to '...merge the physical and virtual' – a flagship achievement for connecting educators on a potential global stage.



The **Learning How Others Learn Theme** team found TePL to be highly effective in supporting the engagement and learning of all participants (pupils, teachers, teacher educators and researchers) working with student teachers from the MA (Hons) Education programme. Feedback from student teachers stated that the knowledge they gained from linking their classroom to that of their partner school was invaluable; TePL enabled them to view classroom practice synchronously and to interact with pupils and teachers at opportune moments.

<sup>1</sup> Donaldson, G (2010) *Teaching Scotland's Future*  
<https://www2.gov.scot/resource/doc/337626/0110852.pdf>

Through TePL, student teachers could observe 'real – world' events unfolding in the classroom from different perspectives and watch recordings after the live link to gain further insight and reflect deeply with a particular focus. Furthermore, TePL afforded student teachers the opportunity to observe a lesson unobtrusively. Pupils and teachers became very comfortable about others engaging with them through the shared space. The pupils, for example, made their own observations about university, enquiring into why the percentage of female students was much higher than that of males, with a young learner enquiring '*Do boys not go to university?*'

## FOCUS AREAS

Within the later stages of Phase Two the emphasis was on:

- mapping the expansion of the network and ways of building capacity and impact
- evaluating the technology and scoping new ideas to develop the concept of SLs, technological capabilities and sustainability
- investigating other funding sources
- collecting, analysing and reflecting on data gathered from the thematic work

- organising and carrying out the dissemination plan e.g. planning networking opportunities: conferences, professional events, academic events, and parents' evenings.

In Phase Three we have focused on:

- developing recommendations and guidelines for network infrastructure and organisation
- developing recommendations and guidelines for SLs and networked digital tools
- synthesising reports including the different uses of SLs based work in teacher induction and career-long professional development
- researching and disseminating the initiative's findings and impact
- embedding TePL in professional learning
- disseminating on a local, regional, national and international stage
- launching TePL as a sustainable network



## 2. ORGANISATION AND ADMINISTRATION



### 2.0 DEVELOPING RECOMMENDATIONS AND GUIDELINES FOR NETWORK INFRASTRUCTURE AND ORGANISATION

In order for the network to work successfully, we built teams of people in the School of Education, Development Officers from each local authority and school teachers who were dedicated to developing professional networks across Aberdeen City, Aberdeenshire and the Highlands. It took a substantial amount of time to 'grow' these teams and establish an effective way of working. Once roles and responsibilities were

identified, discussed and assigned, the TePL initiative was able to flourish. We learned that having this infrastructure in place was essential for the success of the initiative.

Having a designated development officer who supported the teachers to engage in TePL's *Shared Learning Spaces* has been a very important element of the initiative. In a recent evaluation, teachers shared the following information about their local development officer:

*'Our development officer has been really supportive', '...support has been wonderful' 'High quality, high level support...'*

The development officers have worked very closely with the TePL project manager whose role has been crucial to the success of the project:

*'High level of support from the project manager...she is always willing to discuss and support developments', 'Supportive and keen to help in all aspects'.*

Importantly without the Principal Investigator's vision and drive to establish such a strong technology-enhanced professional network with Local Authority partners and schools, this initiative would not have been possible. Along with a dedicated team of teacher educators from within the School of Education, the Principal Investigator planned a series of **Development Days** that have been highly valued by teachers across the network. The organization of Development Days ensured that the initiative had a shared basis which could evolve with our partners to respond to a range of professional learning needs.

The Development Days provided partners across the network with opportunities to reflect on their practice with colleagues within and across schools and the university. These opportunities provided spaces to reflect and plan for those areas of the curriculum to be further investigated according to individual school development plan needs and more collective problem-solving across schools. In this way, the promotion of professionally-owned 'good practice', led to ways of identifying how teaching and learning might be improved and enhanced. It also led to exploring areas of practice that may not have been previously considered. One teacher had this to say about the initiative:

*'Excellent, one of the best examples of partnership I have been involved in. Everything that we needed to engage in the learning and teaching activities we planned was supported'*

The initiative has enabled teacher educators to be part of 'insider views' of the day to day activities of school life and share school teaching practice with student teachers. University researchers supporting busy teachers in engaging in action research or their own school-based enquiry has led to meaningful professional dialogue based on theoretical principles transformed into classroom practices. It has also given students the opportunity to teach pupils through the connected spaces whilst receiving feedback from their peers and course tutors. Significantly, the initiative has enabled tutors and school mentors to observe student teachers on placement and to conduct post-observational analysis using digital analysis tools.

One such tool was developed to provide a bespoke platform for analyzing classroom learning. The analysis of classroom learning was carried out by teachers or teachers and their learners. The LOCIT tool (Learning Oriented Critical Incident Technique) provides a safe web space where visual capture of classroom learning (usually filmed by the

teacher or the learners – with appropriate permissions) is uploaded and subsequently analysed by the user/s to identify short episodes of no more than 2-3 minutes of 'learning moments'. These moments are accompanied by a justification of why this evidence has captured learning as perceived by the teacher or pupil analyst. When the moments are compared, a rich discussion emerges between learners and teachers into how learners learn and what works best for them. Of course, this tool can also be used by teachers to reflect on practice. As such the data can also contribute to evidence for their professional learning portfolio, or by student teachers seeking to understand better the learning environment they are creating.

## RECOMMENDATIONS [1]

1. Importance of team building amongst different participants from different sectors of education requires time investment to grow professional trust and shared ownership of work i.e. the building of a dynamic community of practice
2. Planning learning events organised around themes to provide focus and structure, must be carefully negotiated and agreed to ensure that all

participants understand potential benefits, work towards not only achieving them but integrating an evolving *modus operandi* into regular practice.

3. Provides opportunities for teachers and pupils to be researchers and for student teachers and their school-based and university -based mentors to support professional enquiry as outlined by Donaldson and the GTCS.
4. The analysis of classroom practices to understand and improve learning is fundamental for pupils as well as teachers. TePL provides that opportunity. The LOCIT process is one such way to gain in-depth understanding of classroom data.
5. Participant roles and responsibilities need to be transparent and regularly reviewed at all levels to avoid misunderstandings and work with rather than against the 'busyness' of professional and academic working lives.
6. The range of digital tools which can be incorporated into TePL to enable co-workers to pilot and evaluate them is of great importance. TePL is not about the

technology *per se* but what the technology enables us to do – hence it is imperative to keep abreast of rapid digital developments to extend then range of appropriate tools.

learning mentoring, from connecting individuals through guidance and positive approaches to problem-solving and futures thinking fostering risk-taking and celebrating success,

7. It is crucial to ensure that appropriate support systems are out in place at different levels ranging from technological support to professional

# 3. TECHNOLOGICAL INFRASTRUCTURE AND USE



## 3.0 RECOMMENDATIONS & GUIDELINES FOR SLSS AND NETWORKED DIGITAL TOOLS

As part of the initiative, we have critically evaluated TePL's technological capability in terms of its fitness for purpose and for future enhancement. This evaluation was carried out in two stages; stage one involved our Development Officers observing how teachers engaged with the technology to produce a report of their findings for our **Phase 1 & 2, December 2014 Report**. Stage 2 involved conducting an evaluation with the TePL schoolteachers to establish the level of

confidence they had with the different technologies, their experiences of using the technology, what improvements they would make to the technology and how they foresee the technology being used in the future. Some teacher user responses are presented below:

### Extracts of Teacher Responses

**What, if any, technical, organisational and/or developmental improvements would you make to the TePL initiative?**

*'It would be good if there was a second camera in the classroom that was placed above the board. At the moment, the pupils have to constantly look behind them to see the camera when they are facing the board'*

*'Another camera above the whiteboard and a mobile kit to go from area to area would be ideal'*

*'....the single camera/screen is the only technical development area. Organisationally the programme has been faultless'*

**Can you think of any new ways the TePL equipment might be used in your school in the future?**

*'I can see TePL being used in Highland to support the curriculum especially in remote areas where there are shortages of teachers for specific subjects. Also, to support the development of the 1+2 Languages across Scotland, including the future support and teaching of Gaelic'*

*'I think it could definitely be used effectively to support implementation of 1+2 Languages'*

*'I think it has a lot of potential for language teaching. I would like to try to do a link with a school in China'*

*'In the classroom to share learning. For parents to view learning. For observations e.g. probationers, students'*

*'Mobile unit to use in other class areas, 2nd screen (TV would do) and camera to enhance the conferencing abilities of the equipment'*

*'To maybe link up with local schools as well as the ones who are involved in the project, for interdisciplinary learning & things like that. To share good practice with others in different areas of the curriculum. 1+2 languages programme will be extended to all schools in August 2015 - that would be a good way to use the technology'*

*'Become the main focus for what would take the place of the blackboard and, because of the equipment, we could do inter school projects. High school ASG possibilities and spreading teaching skills across remote rural areas. It makes it possible for us to do an ECO project with a few pupils across many remote schools - main focus cooperation'*

*'....school to school, business interaction, teacher interaction, business and academic links with employers, peer support, student mentoring, the whole student teachers personal responsibility for learning and development. Prepare for professional dialogue, keen to get the student teachers to view their own lessons first then engage in dialogue with partner teacher...would be looking to extend that with student placements ...it moves them away from dependency on teachers...they become proactive regarding the ITE standards. Quite*



good for student teachers to link with other student teachers to do collaborative reflection'

'Using it for training teachers - the assessor could use technology to do a progress review through TePL Assessors can see recordings and multiple views, not just a one-off snapshot more realistic...huge potential'

'I really enjoyed using it for the student teachers...really useful tool for observation and feedback. Really handy to sit down and pinpoint things in the lesson, handy for building awareness. Really like the LHOL links. Lots of remote schools ...I'll be delivering Higher lessons soon...not too confident delivering but if they could ring remotely....if they could dial in that would be super'

'I'd like links with Gaelic medium schools, that's my biggest ask. There's real potential with that. The links we've made so far were good, I can see benefits of bringing Gaelic into schools generally, but children need to be able to speak to other children with Gaelic medium as well'

'Heaps! Want to see it used for staff evaluating their own teaching and learning in a non-threatening way. Potential for using it

with students for observed lessons - not someone with clipboard and more observations. Use it for subjects with difficulties of cover and small take-up subjects and exploring links with other schools to open up pathways that we currently find difficult to staff. To link and work with the university to work with pupils at all levels. Possible S1 class and history department at university could work together'

'International link ups - could our school be linked up with a primary school in China to develop our learning of Mandarin in a real context'



### 3.1 SUMMARY OF FINDINGS

1. Teacher users provided excellent feedback about the opportunities which the digital infrastructure enabled

but also offered useful feedback in terms of its limitations.

2. Key barriers and challenges associated with the technology can be summarised as follows: digital design of the classrooms in different sites (one size does not fit all); the need for multiple cameras but with inhibitive cost implications; two screens to prevent toggling between the visual stream and the IWB; the need for easy booking systems for organising, storing and analysing co-working; the need to explore further the use of mobile units to make the network more inclusive; the need to explore further the use of other common digital devices alongside; then need to be constantly checking and trialling new technologies; the need to explore extending the network to more rural areas and possibly to community venues.
3. Teachers and other educators were excited about the numerous possibilities that our *Shared Learning Spaces* enabled, many of which had been piloted and would not have been possible without TePL. The teachers' comments above are testament to the success of the initiative - TePL did

connect educators, and that a strong sense of shared ownership and understanding of the initiative developed over time.

4. Many teachers wanted to use TePL to support the curriculum in areas where there is a shortage of teachers. They were keen to work across schools to deliver lessons that have a small up take in individual schools. They spoke about the opportunities that TePL opened up in delivering Curriculum for Excellence and for enabling equitable access for all pupils to high quality learning experiences.
5. The teachers were enthusiastic about sharing learning with parents and how giving parents the opportunity to watch lessons had resulted in a better understanding of the learning that took place in school.
6. For teachers, TePL provided them with an opportunity to evaluate their own practice in a non-threatening way.
7. They believed TePL had also been very useful for observing student teachers on placement and were keen to use the technology for this purpose more regularly. Teachers proposed a variety

of scenarios in which the *Shared Learning Spaces* could be used by student teachers. For example, student teachers could use the technology to link up with each other, to link up with assessors, to record their lessons for self and collaborative reflection, and to link with schools in order to deliver lessons. Many of these activities have already taken place within the TePL network (see Appendix 2) but there is now an opportunity to further embed these within the TePL schools and more widely. Teachers have become very comfortable in their *Shared Learning Spaces* and are keen to extend the sharing of their classrooms more widely.

8. A strong recommendation is the crucial need to devote time and energy in developing a strong sense of shared ownership throughout the network.
9. Shared ownership begins with extending user confidence with the technology and developing ways of upskilling and piloting how teaching and learning approaches and techniques have to adjust and change in the shared space.

10. All of these issues need addressing if those leading the TePL initiative are to effectively guide and grow a sustainable partnership.

11. Critical reflection was often mentioned by the teachers, where many actively discussed regularly reviewing whether the direction in which an initiative has taken/is taking is fruitful and how we might improve our collaborative practices from both a technological and pedagogic perspective.

12. It is important to identify and actively promote shared interests and commitment to the initiative in order to demonstrate mutual benefits for all participants. We believe it is fundamental to the effective use of digital technology. In other words, the sense of shared learning led the way and not the technology.

## RECOMMENDATIONS [2]

The **design of the space** within individual schools and classrooms needs to be more carefully thought through. A template has been developed to assist new and existing

school make adjustments and take important decisions (e.g. where is the optimum space in the school for shared learning; how can the camera/cameras be better positioned; what about the audio demands depending on where TePL classroom is situated (e.g. near the library or gym in a specific subject classroom)).

**Additional equipment** to be acquired according to funding is also essential – e.g. some teachers referred to: a monitoring screen, a group microphone, breakout group ways of working and digital demands of group work.

**Maintenance and budgets** for updating or replacing equipment need to be discussed and agreed at an early stage.

**A pioneering digital sub-group** needs to be active in order to take account of digital issues and new technologies. 'Thinking outside the box' is essential in terms of how shared learning can support different learners in different schools and involve community and other sites to support shared learning especially in terms of finding solutions – STEM shortages, rurality, Gaelic-medium, languages across national boundaries, employability and mobility.

**Effective administration and timetabling of events** and links is fundamental to avoid

misunderstandings, overlap and wasted time. The TePL initiative must continue to be have an administrative stricture for sustainability.

**Mobile and cheaper alternatives, static and mobile**, also need to be explore further to ensure that more schools can join the network.

The potential of using TePL spaces to enable **streaming** depending on certain types of shared learning e.g. webinars, university seminars, opens up professional learning to many may more schools. This needs to be explored further. The Expansive Education input was extremely successful.

**Futures thinking** is to be encouraged. The teachers could see benefits in terms of their own learning, but also for student teachers and developing international links. Again, there was a reiteration that TePL is not about the technology but about how an alternative way of learning can lead to defined, substantiated benefits for our learners.

## 4. THEMATIC LEARNING SPACES



As referred to previously, four thematic teams were co-constructed: *Creating Climates for Learning*; *Transitions for Expansive Learning*; *Learning How Others Learn*; and *Language, Literacies and Learning*. These themes provided the impetus and focus for our shared learning, which generated a wide range of shared learning activities particularly within the *Languages, Literacies and Learning theme* and *Learning How Others Learn* themes. Teams became motivated about the potential learning scenarios offered by the themes and a number of sub themes

emerged out of ideas teams created at the professional learning Development Days.

### 4.0 PUBLICATION OF THEMATIC REPORTS

We have provided examples of the shared learning that took place linked especially but not only associated with each theme. A selection of activities is briefly presented below with a more detailed summary available in Appendix 3.



## THEME: LANGUAGES, LITERACIES AND LEARNING (3LS)

Questions re: outcomes of the 3LS theme:	Description of Thematic Outcomes
1. What was the overarching goal of this theme?	<p>The main objective was to explore the relationship between languages, literacies and learning in TePL through a multi-perspectival approach across schools, between schools and the School of Education (i.e. connected educators) with three clear drivers:</p> <ol style="list-style-type: none"> <li>1. Innovative ways of <b>promoting</b> SG policy of <b>1 + 2</b> in all primary schools</li> <li>2. Exploring how to use multilingual and multicultural classrooms to enhance languages and literacies (including foreign languages, home languages, heritage languages, Gaelic-medium and new languages spoken by multilingual families and teachers) in different schools. This involved raising awareness amongst student teachers of the demands and possibilities of <b>integrated approaches</b> to learning.</li> <li>3. Ensuring that different teachers with a wide range of skills and expertise could work collaboratively and safely together for the positive expansion of supporting different languages used in our schools.</li> </ol>
2. What was successful and what did we achieve?	<p>Developing innovative approaches to learning - which capture the above themes - resulted in introducing and understanding better the concept of pluriliteracies across the curriculum. Pluriliteracies as an area for investigating in the classroom involved:</p> <p>Danestone, Middleton Park, Bunscoil Inverness, Fort William, Dunnottar</p> <ul style="list-style-type: none"> <li>• Pupils teaching pupils (developing linguistic confidence and intercultural awareness)</li> <li>• Story telling (literacies across languages and cultures)</li> <li>• Student teachers teaching pupils (students using their language skills to support and enable 1 + 2 in schools across a range of languages – itself motivating for the learners)</li> <li>• The travels of a <i>Louie le Lion</i> as he adventured from school to school</li> </ul> <p>There were excellent examples of success: very young learners of Mandarin in Danestone teaching the older pupils in Fort William and vice versa with the older pupils teaching the small children some French; the student teachers carrying out micro teaching in French, German and Spanish across the primary schools; the motivation which accompanied the travels of the little Lion across the schools and creating adventures and stories (as cross-disciplinary activities) about his adventures; the student teachers being able to offer support and materials to some of the experienced but non-language</p>



	<p>teachers in primary school; a sense of collaborative and share learning where different classes were all involved from different schools yet focused on developing activities together; a genuine sense of participating in active learning and achievement in learning together.</p>
<p>3. What were some of the challenges?</p>	<ol style="list-style-type: none"> <li>1. Timing of availability with student teachers/teachers and learners</li> <li>2. Time taken in preparation of materials</li> <li>3. Organization involved when several schools are working on the same project simultaneously. This required specific input from administrators to enable this to be orchestrated and to deal with any technical issues.</li> <li>4. Importance of ensuring that all those involved have a shared understanding of the goals.</li> <li>5. Follow through to ensure learning potential is realised.</li> </ol>
<p>4. What lessons did we learn? How does this help improve our practice?</p>	<ul style="list-style-type: none"> <li>• Preparation before any links is essential using a wide range of technology and physical presence e.g. student teachers sending their resources and plans to the schools – not always possible digitally</li> <li>• Active involvement of learners had a snowball effect- their enthusiasm and motivation projected our ideas forward</li> <li>• Ensure that all pupils involved are 'rewarded' e.g. in the primary schools with stickers or with certificates- something they can take home and use to discuss at home.</li> <li>• Professional trust was developed by acknowledging the different roles each player had and how essential these were to the whole. E.g. university researcher assisting with a literature review to support a classroom action research initiative on family involvement in maths homework whilst the teachers were supporting student teacher learning.</li> <li>• The additional use of some of the links which were recorded for CLPL purposes or for idea triggers for future working (obviously with appropriate permissions)</li> <li>• Genuine celebration of success through media, blogs and networks so that other teachers, schools and School of Education can participate.</li> <li>• Ensure that leading the activities is shared and that it is not always the University which suggests possible links but that much co-operative and collaborative planning grows and develops shared leadership.</li> </ul>

## THEME: LEARNING HOW OTHERS LEARN (LHOL)

Questions re: outcomes of the LHOL theme	Description of Thematic Outcomes
1. What were the overarching goals?	<p>The overarching goals were to:</p> <ul style="list-style-type: none"> <li>• Investigate how TePL scaffolds and supports the engagement and learning of all participants (children, tutors, students &amp; teachers) within a University course working with students who are in the first year of the MA (Hons) Education programme.</li> <li>• Enquire into how live links support developing knowledge and understanding of aspects of a positive climate for learning</li> <li>• Discover how live links support engagement with collaborative enquiry</li> </ul>
2. What was successful and what did we achieve?	<p>We successfully linked up with schools in the TePL network on many occasions and as a result, student teachers were able to gain a detailed insight into the culture of different schools. Student teachers were able to observe lessons with a specific focus each time, synchronously and unobtrusively. School pupils actively lead sessions that involved student teachers familiarizing themselves with schools and reflected on this afterwards. TePL links enabled us to see clearly how pupils were developing the Four Capacities.</p> <p>Additionally student teachers had the advantage of being able to observe the physical learning environments and discuss this with their peers, school pupils, and teachers. Student teachers really valued the opportunity to experience different scenarios in the school synchronously.</p> <p>TePL links not only supported engagement with collaborative enquiry by allowing student teachers to see teaching in action but also how the 5 key themes – communication, environment, relationships, social conventions and emotions/feelings – are involved in the teaching process.</p>
3. What were some of the challenges?	<p>The tutorial groups for student teachers were very large, involving at least 50 students. Initially, this made them feel apprehensive at the prospect of posing questions to teachers and pupils at the other site, whilst surrounded by a large audience. However, we overcame this challenge by developing a clear structure and supporting students to build confidence.</p> <p>In the early months of the initiative teachers appeared to have developed very structured lessons that seemed to have been designed for the TePL link. However, over time most teachers developed the confidence to engage in 'normal' lessons when linking with other TePL sites.</p> <p>Teachers were very keen to get feedback from lecturers at the university and lecturers wanted to accommodate this in a sensitive, considered and structured way. A genuine sense of professional trust evolved and became a hallmark of the network.</p>
4. What lessons did we learn? How does this help	<p>We learned that participants need time to gain confidence familiarizing themselves with the technology and exploring its capabilities. That preparing</p>

improve our practice?	for a link is essential and requires participants to become digitally literate with a number of technologies and supported to develop effective technology communication skills.
-----------------------	--

## THEME: CREATING CLIMATES FOR LEARNING (CCL)

Questions re: outcomes of the CCL theme	Description of Thematic Outcomes
1. What were the overarching goals?	<p>Schoolteachers within the TePL network took a lead on this theme. They developed several goals:</p> <ol style="list-style-type: none"> <li>1. utilize the TePL equipment to support evidencing practice and review the impact of our professional enquiry focus</li> <li>2. focus on active literacy and explore how we might model the use of the TePL technology to capture, analyse, evaluate, and share practice</li> <li>3. focus on tutor observation of student teachers practice using TePL technology to view and record lessons remotely and follow up lesson analysis by tutor and student teacher</li> </ol>
2. What was successful? What did we achieve?	<p>Teachers were very engaged in their professional enquiry action research projects; in Danestone Primary for example every staff member participated in an ARP and received support from a university staff member throughout this process.</p> <p>Teachers were very willing to capture their lessons for the purposes of self and peer reflection</p> <p>Utilising Shared Learning Spaces to observe student teachers on placement was invaluable for everyone who participated. Those on placement felt that they had the opportunity to engage in deeper self-reflection, as well as reflection with their peers and tutors.</p> <p>A very successful outcome of this theme was the extent to which teachers utilized the recording of their teaching practice. Teachers shared recorded lessons with their pupils asking them to provide feedback about how they delivered their lesson i.e. 'Did you understand my instructions here', 'Could you hear me?', and 'What learning was taking place?' This was an exceptional example of encouraging pupil voice; it genuinely supported pupils to reflect on their learning.</p> <p><b>Having a series of professional enquiry masterclasses take place through TePL's Shared Learning spaces provided numerous advantages:</b></p> <ul style="list-style-type: none"> <li>• An unlimited number of educators were able to attend the webinars</li> </ul>

	<p>without the need to travel,</p> <ul style="list-style-type: none"> <li>• They were able to engage with their colleagues in the comfort of their own school,</li> <li>• Educators were able to engage in professional dialogue with their colleagues openly by temporarily limiting access to their shared learning site and control when they wanted to reengage with other sites,</li> <li>• Educators were able to engage with colleagues from a wide number of other schools and share practice.</li> </ul> <p>This example of the use of TePL Shared Learning Spaces provides an insight into the many ways educators can share their learning spaces. Using the SLSs suddenly opens up what was previously situated and largely inaccessible knowledge due to constraints on educators such as time and space.</p> <p>The potential of the SLSs goes well beyond what we have already explored in this pilot project; its capabilities are vast.</p>
3. What were some of the challenges?	<p>Because TePL Shared Learning spaces are situated within one or two classrooms within each site this presented a few challenges for those whose professional enquiry focus was to film their lesson within their normal classroom environment. Teachers felt that if they had relocated their class to the SLS it would have affected the outcome of their research that had a specific focus on the classroom environment.</p> <p>Timetabling often prevented student teachers being able to link up with each other to share their learning spaces. Advanced planning would have resolved this issue and teachers are keen to ensure that this is prioritized.</p> <p>The physical limitations of the static TePL technology sometimes presented challenges for sharing our learning spaces more regularly.</p>
4. What lessons did we learn and how does help us improve our practice?	<p>We learned that whilst we wanted to use the TePL technology more frequently for a variety of purposes. It was not always possible. However, the flip side of this was that we planned the links more carefully than we might have otherwise. In fact, a key lesson we have learned within this whole process is how essential it is to both plan how we will share our learning spaces to provide a space in which informal links can occur so that participants get to know one another. This process of familiarisation allows participants to feel at ease, it sets the scene for more formal, focused and professional links to occur. It breaks the ice and builds relationships that are crucial since interaction does not occur face to face, especially since people are simultaneously required to develop a degree of digital literacy in order for the interaction to take place seamlessly.</p> <p>A core group of people were pioneers in the way they occupied and utilized the Shared Learning Spaces. We learned that this is a natural process in the development of any initiative that aims to 'think outside the box' and how essential those pioneers are in taking things forward positively.</p>

## THEME: TRANSITIONS FOR EXPANSIVE LEARNING

Questions re: outcomes of the Transitions theme:	Description of Thematic Outcomes
1. What were the overarching goals?	<p>There were important questions teachers wanted to answer about how they can support pupils through their transitions. The TePL project provided an opportunity to think about what we need to know in order to do this and how the Shared Learning Spaces might support that exploration. The key objectives for this theme were:</p> <ul style="list-style-type: none"> <li>• To examine how technologies can be used to further understanding of key educational transitions</li> <li>• To use technologies as a means of enhancing pupil voice in our understanding and management of transitions</li> <li>• To share learning between participating schools, using appropriate technologies.</li> </ul>
2. What was successful? What did we achieve?	<p>The team carefully planned the project by developing a shared understanding of the term <i>transitions</i> and determining the purpose for carrying out a shared project in this area.</p> <p>Teachers used the Shared Learning Spaces to share video footage of pupils discussing and going through transitions. Participants described how utilizing the Shared Learning Spaces was a fruitful way of sharing ideas and professional perspectives.</p>
3. What were some of the challenges?	<p>It took some time to get this theme started. It was very time sensitive given the focus was transitions and other themes took precedence within the TePL network. We recognised the need to have a strong theme leader capable of providing the direction and guidance to commence work. We also recognised that there were competing demands placed on teachers who were already involved in other TePL themes. Teachers found the theme very beneficial once work commenced but at the time of writing, this theme was very much in its infancy therefore an in-depth perspective of our successes and challenges is not possible.</p>
4. What lessons did we learn? How does this help improve our practice?	<p>We found that collectively we needed to have an overview of all the activities that were taking place within the TePL network in order to prevent overlap. Also that it was essential for professionals to feel at ease describing the level of involvement they had within other TePL themes, for SMTs to make decisions about whether they had the capacity to participate in new themes and how they might benefit staff members.</p> <p>One of TePL's objectives was to <i>enhance</i> professional learning and certainly</p>

not to increase the workload of teachers. As a team we were very mindful of this and discussions eased the pressure teachers were feeling around this issue. We also considered if having four TePL themes might have been too many for those within the network.

#### 4.1 SHARED LEARNING SPACES IN TEACHER EDUCATION AND CAREER-LONG PROFESSIONAL DEVELOPMENT



Through TePL we have explored and developed the application of a *Shared Learning Spaces* way of working within teacher induction and career-long professional development. TePL has provided us with a myriad of *Shared Learning Spaces* experiences, it has functioned as an

observational space; as a collaborative space for discussions and meetings; as a space for interactive games across several geographical areas; as a learning space in

many different capacities such as understanding and engaging in professional enquiry, learning how to teach, learning how to learn, learning languages; as a creative space in which pupils have shared performances with one another and storytellers have engaged schools pupils in multiple sites; as a space to develop digital literacy and technology-enhanced pedagogies; and as a space where 'normal' work (in this case lessons) can be analysed and shared.

TePL requires us to think differently about how we conceptualise learning across spaces. A *Shared Learning Space* pedagogy began to emerge and provided the impetus for innovative ways of working. It encourages genuine equity especially pupil voice and is a catalyst for deep reflection. It captures practice for analysis through LOCIT.

#### 4.2. NEW INITIATIVES

Schools have started to embed TePL into their everyday practice; they are keen to take the *Shared Learning Spaces* beyond their current



usage. During Development Days, we spoke about the potential for existing TePL schools to become hubs - hubs that are able to demonstrate to new schools some of the capabilities that the *Shared Learning Spaces* have to offer. Educators within the TePL network have made many suggestions including:

- how TePL might provide absent pupils with the support to continue their learning;
- how university staff could provide extra-curricular school activities using the equipment;
- how senior pupils might take ownership of a TePL project to demonstrate their high-quality learning to an audience;
- how particular schools might become student teacher 'hubs' as part of a pioneering scheme;
- how we might utilise the SLs as a way to extend and enhance the STEM curriculum.

- how we can disseminate the concept of shared learning more nationally and internationally

Those within the TePL network were very keen to establish an international dimension to the initiative and focussed on China particularly because Mandarin had been a key activity with the *Shared*

*Learning Spaces*. At this stage, Oldmachar Academy expressed keen interest in joining the network with the intention of developing a city centre hub for pupils to learn Mandarin. TePL Development Officers commenced investigations into how we might not only extend the network but how we might simultaneously introduce a mobile TePL unit. At the time of writing, the TePL Development Officers were investigating what equipment would be required for this to enable more schools to participate without prevention by financial barriers.

## 5. RESEARCH

### 5.0. INTRODUCTION

The TePL initiative which is complex and multi-faceted required an approach to research which was robust and multi-layered ranging from class based professional enquiry by the teachers and school participants to empirical

research carried out by the academic team. The diagram below represents the different avenues of TePL research.



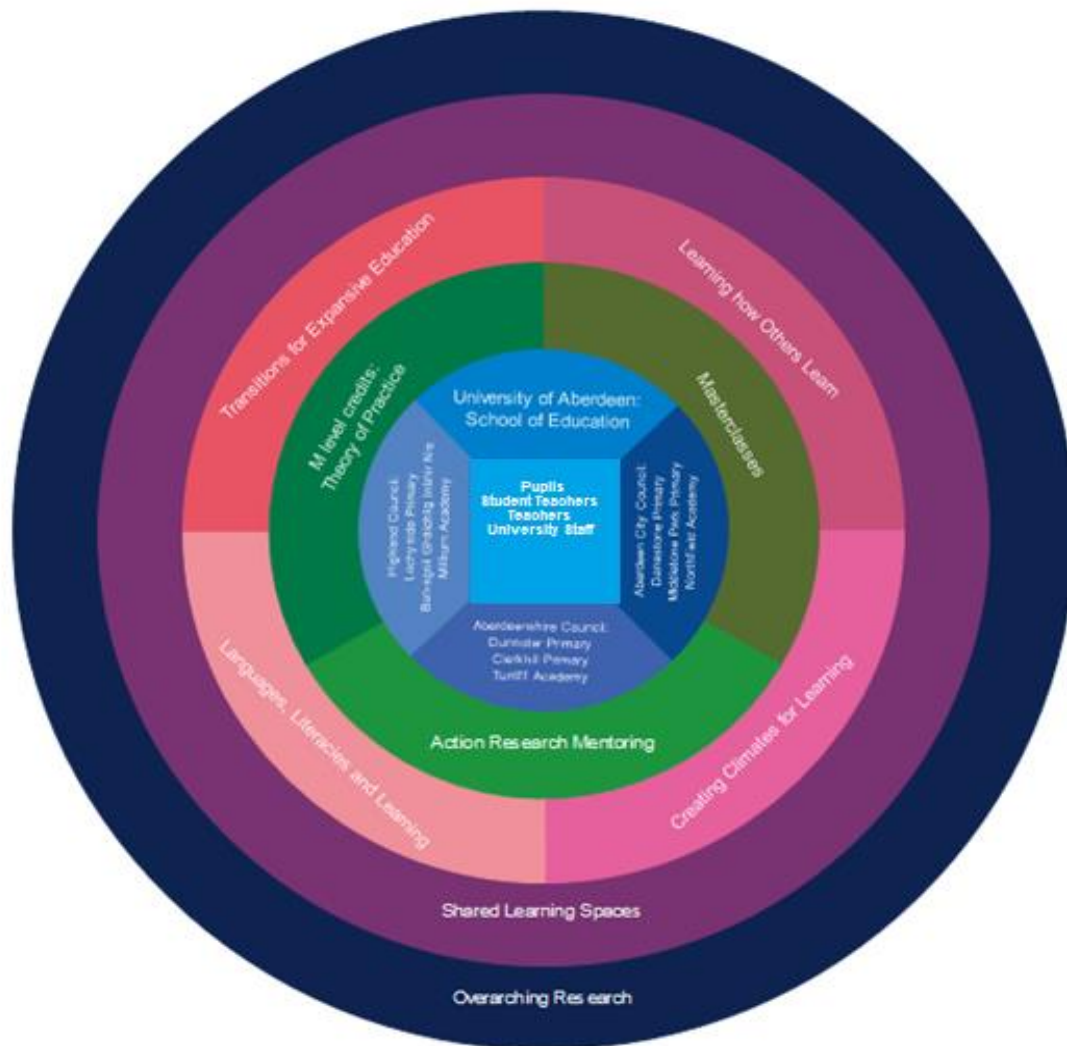
### 5.1 EMPIRICAL RESEARCH

The empirical research is not detailed in this report but is summarised within this section.



The TePL team took a mixed method approach to the empirical research drawing on Activity Theory and the findings of the Participatory Action Research. We developed a research plan that addressed the questions that emerged from working with the participants. Given the scale of the project and level of involvement across three authorities multiple data sources emerged.

The table below provides information about the questions we asked and the methods we employed to gather data.



## 5.2 RESEARCH QUESTIONS & METHODS EMPLOYED FOR GATHERING THE EVIDENCE

Research Focus	Data Sets
How do user perceptions influence the use and development of TePL?	<ul style="list-style-type: none"> <li>• SoE staff interviews</li> <li>• Teacher interviews</li> <li>• Student teacher interviews</li> <li>• Student teacher focus groups</li> <li>• LA staff interviews</li> <li>• Student teacher questionnaires</li> <li>• Pupil focus groups</li> </ul>
What partnership models emerge from shared	<ul style="list-style-type: none"> <li>• SoE staff interviews</li> <li>• Teacher interviews</li> </ul>

experiences?	<ul style="list-style-type: none"> <li>• Student teacher interviews</li> <li>• Student teacher focus groups</li> <li>• LA staff interviews</li> <li>• Student teacher questionnaires</li> </ul>
What are the affordances and constraints of developing the phenomenon of 'connected educators'?	<ul style="list-style-type: none"> <li>• SoE staff interviews</li> <li>• Teacher interviews</li> <li>• Student teacher interviews</li> <li>• Student teacher focus groups</li> <li>• LA staff interviews</li> <li>• Student teacher questionnaires</li> </ul>
How is interactive and collaborative technology transforming learning and teaching?	<ul style="list-style-type: none"> <li>• SoE staff interviews</li> <li>• Teacher interviews</li> <li>• Student teacher interviews</li> <li>• Student teacher focus groups</li> <li>• LA staff interviews</li> <li>• Student teacher questionnaires</li> </ul>

### 5.3 RESEARCH DESIGN

The design was fit-for purpose in that we adopted and adapted both an Activity Theory approach (Gedera & Williams, 2016)<sup>2</sup> as well as Participatory Action Research principles to bring together the separate strands, types and focuses of the research involving both qualitative and quantitative methods. Statistical data analysis was used where quantitative measures were appropriate. We chose this combined

overarching approach because the methodology had the potential to involve all participants at different levels engaging in and defining the shared learning phenomenon – i.e. understanding the optimum ecological conditions for grow communities of practice. This included capturing interaction and collaboration, embodiment in physical and digital spaces, observing practice, gathering and analysing very different data sets, reflecting upon it, developing hypotheses and often implementing change (Somekh & Lewin,

---

<sup>2</sup> Gedera, D. S. P. & Williams, P. J. (Eds). (2016). *Activity Theory in Education: Research and Practice*, Sense, Rotterdam, The Netherlands.

2005)<sup>3</sup>. Gathering baseline data and further data at different phases of the initiative, gave us the opportunity to reflect deeply on the potential of initiative, its vision, its realities, its affordances and challenges, its enactment and to do that inclusively through involvement of all participants.

## 5.4 DATA ANALYSIS

We took a mixed method approach to our research, using content analysis and NVivo to analyse some data sets and thematic analysis for others. These were the most appropriate methods of analysis to use given that we had a wide range of data including: documents, videos, pictures and artefacts. The questionnaire data were then analysed using NVivo. These two approaches enabled us to perform a deep and thorough level of analysis of our data in a non-intrusive way.

## 5.5 BRIEF SUMMARY OF DATA ANALYSIS

Research demonstrated that pupils, student teachers, teachers, and university educators

within the network invested in the concept of *Shared Learning Spaces*. In the TePL network it is estimated that over 1,000 connected educators and learners participated in the SLs and an identified group of others were identified who wished to join in the future. The research findings demonstrate that participants were highly invested in TePL. Numerous ideas were being proposed in terms of the possible further uses of the SLs and a recognition that what was key to successful linking between sites was being able to plan connections collaboratively and engage in informal links prior to the official ones. We were concerned that when the technology went through a snagging phase, people might disengage because the technology was not easy to use. However, we found that the majority of participants had a great deal of resilience and determination. Others required a bit more support from Development Officers and key members of staff at the university who ensured a relationship was maintained and we continued connecting where possible.

Participants could see the potential the *Shared Learning Spaces* had and utilised alternative technologies when others failed to work. A key issue for participants was that the TePL technology was not mobile and many participants mentioned the necessity of getting the screens and cameras in the correct place. They found this to be a barrier

---

<sup>3</sup> Somekh, B. & Lewin, C. (2005) *Research Methods in the Social Sciences*, Sage, London, UK.

to communication and in some cases, cameras were moved to accommodate physical issues. Overall, the willingness and drive to continue sharing learning in the TePL spaces was extremely strong despite significant technical difficulties. The medium to longer term barriers we faced were more to do with a lack of experience and confidence engaging in a technology enhanced space, in a digital culture that was different to the norm. However, with appropriate and continued leadership and ambassadors in place, teachers thrived in this new digital community. Additionally, having a core group of pioneers who could push the boundaries of partnership into the unknown was what made TePL sustainable.

## 5.6 PROFESSIONAL ENQUIRY

As part of the TePL initiative teachers had an opportunity to engage in their own class based professional enquiry research projects. These projects were initiated by a series of professional enquiry masterclasses and supported by university educators who volunteered to mentor teachers through the research process. The table below provides an example of the types of research projects teachers engaged in.

### EXAMPLES OF TEACHER PROFESSIONAL ENQUIRY PROJECTS

#### **Project 1**

The teacher provided three sample questions on the one focus: Collaborative learning's relationship with engagement levels:

Q1. Does collaborative learning improve the levels of engagement/interaction for students in a primary first stage classroom?

Q2. If I focus lessons towards developing the correct use of collaborative learning in the classroom will engagement levels rise among the class?

Q3. Will a focus on collaborative learning in my classroom see a rise in the ability of learners to engage with the lesson?

#### **Project 2**

If I set up each reading group at a table with a tray of all the resources they need for their taught, independent and Active Literacy activities to hand, will they:



- a) (for the majority of pupils) complete their independent work, with in some cases less support, to a higher standard than they currently are?
- b) Or (for a minority who are currently struggling to complete work at all) focus better on their independent tasks and complete at least some of their work while not distracting others

### **Project 3**

If I make my pupils aware of the importance of the story corner will they be more focused during this teaching time?

### **Project 4**

If I give clear verbal and written expectations in terms of teamwork, and reward pupils meeting of these expectations, will tolerance of others improve?

### **Project 4**

Q1) If we train our Primary two children to become coaches for the Primary one children, will our children become more independent learners?

Q2) Will our Primary two children (the coaches) benefit in positive ways as a result of the main concerns?

### **Project 5**

Some of the children I encounter in my day are less resilient than others. Why?

### **Project 6**

If I get children to redraft their work at least twice, will their pride towards their written work improve?

### **Project 7**

The children come into Nursery and select an activity, they are settled for a period of time and then a small proportion of the children all begin to approach the 2 adults, demanding attention.

If I give the children 2-3 strategies (not all at the same time) that do not involve the adult initially, will matters improve? e.g. Will they seek help elsewhere (see strategies)

### **Project 8**

If I take a "try 3 before me" approach, will children become less reliant on the teacher and more independent and resilient when it comes to being stuck?

### Project 9

If I allow children to listen to music when writing, will children have a higher concentration level and therefore produce a higher quality of writing?

### Project 10

If I introduce a class task board with one allocated starting activity for each group, will the children have a breadth of experience rather than one focused activity?

### Project 11

How can I encourage and enable parents and/or carers to take an active interest in their children's homework especially maths?

### Project 12

What strategies can I employ to enable the class teacher who knows very little Mandarin to provide practice opportunities between weekly lessons?

## 5.7 COLLABORATIVE RESEARCH WITH OTHER GROUPS BEYOND TEPL

A key aim of the TePL initiative was to explore avenues of collaborative research with other groups beyond TePL which we have successfully achieved. We laid the foundations for diverse avenues of collaboration to emerge around the concept of *Shared Learning Spaces*. We made particularly strong links with Expansive

Education<sup>4</sup>, Uppsala University, University of Applied Sciences Upper Austria, and Mountain Park Elementary School in Georgia, USA. These groups have all experienced learning within the *Shared Learning Spaces* and as a result are looking for ways to strengthen the links and frame the direction that this initiative will take us in. See section 6.0 for examples of the types of collaborative work we are planning.

---

<sup>4</sup> <http://www.expansiveeducation.net>

## 5.8 RESEARCH AND DISSEMINATION OF FINDINGS

### Conference attendance

The TePL team identified several networking events, conferences, parents' evenings, professional and academic events in which to disseminate the professional learning that has taken place as a result of the initiative including the Scottish Educational Research Association (SERA) conference, Aberdeen Learning Festival (AFL) and Scottish Teachers for Enhancing Practice (STEP) conferences. This 'presence' will continue to promote the initiative at events such as the:

British Education Research Association (BERA) conference, European Educational Research Association Conference (EERA), technology conferences, and national and local learning events throughout Scotland. See section 7.0 for more details.

### Media coverage

TePL has featured within a range of media outlets including school and university websites, news articles such as a TES editorial shown below and has received attention from universities around the world.



### Research networks

What we were looking at within TePL is a multi-layered perspective to the research which involved simultaneous strands and supports practitioner research advocated by the General Teaching Council of Scotland. This approach included teachers embarking on professional enquiry projects, pupils reviewing their learning and analysing the *Shared Learning Spaces*, those on the Theory of Practice course conducting research on different areas of *Shared Learning Space* practice, and thematic teams conducting research within and across the four TePL themes. The scientific TePL team conducted research into the phenomenon of SLs, focussing on the TePL network as a whole from multiple perspectives.



We concluded that the *Shared Learning Spaces* we developed offer an alternative to the confines of conventional learning environments. Williams et al (2011)<sup>5</sup> amongst others, called for institutions to 'broaden their learning spaces to allow greater flexibility and more self-organisation' (p.1). TePL has gone well beyond the learning ecologies described by Williams et al. The SLSs comprise dynamic learning ecologies where learning is emergent yet organised; and those within the network are able to operate both within the traditional learning environment and the digital environment simultaneously. SLSs as a phenomenon has enabled educators and learners to collaborate in multiple ways by providing opportunities which are unique to specific spaces and partnerships and which 'grow' professional learning, pupil engagement, enrich teacher education contexts and authenticate communities of practice.

---

<sup>5</sup> Williams, R, Karousou, R & Mackness, J 2011, [\*'Emergent learning and learning ecologies in Web 2.0'\*](#) International Review of Research in Open and Distance Learning, vol. 12, no. 3, pp. 39-60.

# 6 SUSTAINABILITY AND NEXT STEPS



A series of meetings was held to evaluate our work within the *Shared Learning Spaces*. A key milestone to be addressed concerned sustainability. TePL had to continue not only to flourish but also to grow, evolve and potentially change according to a wide range of variables including budgets, changes in staffing, newer technologies and so on. Some schools might wish to increase and others decrease their TePL activities. Some participants wanted to promote interactive networks and above all, there was a sense of urgency around working in sites where the technological infrastructure would work when needed and generate new ideas.

Constant ideas emerged throughout the TePL network. It was therefore decided to set up a **Think Tank** as a way of crystallising ideas and organising them in such a way to inform future planning:

## 6.0 HOW MIGHT TEPL SUPPORT SPECIFIC EDUCATIONAL PRIORITIES AND BUILD CAPACITY?

In this section we detail some of the emergent ideas that participants were keen to develop in terms of sustainable measures. Any ideas had to align with key priorities within education.

### 1. Shortage subjects in the curriculum

Currently teachers of STEM subjects are in high demand; Scotland has seen a number of STEM professionals exiting industry with high-level qualifications but who are prevented from engaging in ITE due to qualification requirements. The GTCS have now reviewed their requirements for entry onto ITE courses.

There has also been a recognition for upskilling primary school teachers on STEM subjects, with a specific requirement to develop consistency in the use of technical terminology.

Furthermore, there is a need to make advanced higher science more accessible to pupils who show an interest in this.

Recognising these key issues, the TePL team believe that the *Shared Learning Spaces* could help fill a gap and make STEM subjects more accessible to a wider population and specifically address Scotland's needs for increasing capacity within industry.

## 6.1 PARTNERSHIP WITH THE EXPANSIVE EDUCATION NETWORK

### 2. Capacity building through existing networks

Throughout the last academic year, the Expansive Education Network (University of Winchester) led by Bill Lucas and the University of Aberdeen (School of Education) led by Do Coyle have been exploring a range of possibilities for extending the Expansive Education Network to Scotland. Funded by the Gordon Cook Foundation, Bill Lucas was able to make several visits to the north of Scotland working with schools, teachers, head teachers, teacher educators and local authorities. In particular, colleagues at the

School of Education welcomed Bill since there were clear synergies between growing the EEN and the evolution of the TePL initiative. Through a range of discussions new groups have emerged that are connected by the common goal of enabling teachers at various career points to engage in professional enquiry/action research. We have been able to scope a clear sense of direction for our collaboration over the next two years and have already delivered several professional enquiry EEN masterclasses within the *Shared Learning Spaces*.

### 3. Exploring new contexts

From a range of discussions with all stakeholders i.e. teacher educators, Local Authority and school colleagues, two distinct strands have emerged which point the way towards growing a rich professional and academic collaboration. These are set out as follows:

#### (i) Setting up EARL (Expansive Education Research Lab, UoA)

- The purpose of EARL would be to engage in data mining to carry out meta-analysis of micro level case studies and action research projects



which teachers have carried out in their classrooms – in shared initiatives (e.g. NQTs small scale action research projects) and those under the umbrella of the Expansive Education Network. This could enable us to explore trends, concerns and successful practices across a wide range of contexts not only in Scotland but also across the UK and in other countries where Expansive Education has a presence (e.g. Finland).

- EARL has the potential to become a pioneering research base for all countries engaged in Expansive Education.
- This approach to empirical research could enable teacher enquiry and research to have a stronger voice in both academic and professional contexts and will seek to share practices on a local, national and international level.

(ii) Creative technologies: being digitally connected

- The development of a MOOC which explores fundamental theoretical principles underpinning Expansive Education and connecting to professional enquiry could be offered

on the TePL website. On an informal basis, the resource would be offered to any professionals and could serve as a tool for those adopting an expansive education approach in their school. On a more formal basis the MOOC is a resource which colleagues at the University of Aberdeen could use in a more structured way with both students and experienced teachers and other professionals to underpin M level study and its application in classrooms.

- EEN and UoA would also use the latest technologies to connect with the network of schools involved in TePL – providing evidence of how *Shared Learning Spaces* video link and IWB connectivity can enhance learning. Other digital tools will also be made available (e.g. LOCIT).

## 6.2 EXTENDING THE SLS NETWORK

The core TePL group had a very clear intention to create a shared sense of ownership between all participants within and across the network. Working on the premise that in order to develop a sustainable network there had to be a 'shared domain of interest' (Wenger, p.1), this requires engagement with others in organising and determining the

'process and to some extent the learning destinations' (Williams et al, 2011, p.1). TePL developed a strong core group of professionals across the SLs. As to be expected, uniformity was not a goal and indeed each site had to bring a specific set of principles, aims, goals and projected outcomes particular to their own priorities and contexts. Some sites were unpredictable in their level of involvement, some more constant but belonging to the network took account of such differences. We learned that it is better to start small and grow and strengthen the network slowly – to enable individual sites to grow their own *modus operandi*. Therefore, when new sites came 'on board', other sites provided mentoring and examples of how TePL could work for them and encourage them to work towards strengthening transparent benefits e.g. those based on a School Improvement Plan. Sites as they joined were provided with a 'comfortable place' from which to participate. The sites that have recently joined the TePL network include Northfield Academy whose involvement has centred on the primary/secondary transition. The school created digital diaries of key moments recorded using iPads and then discussed these with other secondary schools involved in the transitions theme. As yet TePL technology has not been installed within the school. However, 6 transitions teacher has been able

to share learning with others using technology at the university. This has given the TePL team time to investigate options of a more mobile unit within the schools and other institutions interested in joining the network. As mentioned in section 4.3, the TePL team were also discussing how Oldmachar Academy might also become involved in the initiative.

### 6.3 EMBEDDING TEPL IN PROFESSIONAL LEARNING

TePL's Shared Learning Spaces have been the conduit for bringing professionals together, developing strong partnership and enhancing our professional learning in innovative and exciting ways. As TePL further embeds within professional learning, we are seeing increasing examples of how it is bringing communities of educators together. What we hope to achieve is the 'normalisation' of SLs becoming integrated in professional work which enacts and supports professional learning. There is evidence within sites that both utilise the technology and engage with those in the network regularly. Through the publication of template (e.g. M level, professional enquiry) across our strong partnership with schools, local authorities and the Expansive Education Network, we have been able to embed TePL into professional learning. Below is a list of examples of some

activities demonstrating how this is taking place:

1. Expansive Education in collaboration with University of Aberdeen has been delivering a series of professional enquiry **masterclasses** for educationalists within the TePL network and beyond.
2. University staff have been **mentoring** school teachers who are embarking on their first professional enquiry/action research project.
3. Student teachers have been engaging in **self & peer reflection** through the Shared Learning Space. School teachers have also been engaging in deep reflection about their lessons, conditions for learning and classroom contexts with university staff and asking them for feedback.



# 7 DISSEMINATION AND FINAL EVALUATION

The team developed a dissemination plan in order to showcase and celebrate our achievements. Key events included a presence at the Scottish Learning Festival, SERA (Scottish Educational Research Association), Aberdeen Learning Festival, BERA (British Educational Research Association), STEP (Scottish Teachers for Enhancing Practice) and the BETT Learning Technology in London. We also showcased our work to leading educationalists at international conferences and locally to schools interested in joining the TePL network. The TePL website led to international interest being fostered and disseminated. As we complete our research - within both professional and academic contexts - further events are planned to showcase the initiative and expand the network.

## 7.0. OFFICIAL LAUNCH OF TEPL- NATIONAL/REGIONAL EVENT

To showcase innovative work within the TePL network, we officially launched TePL at a celebration event on 3 September 2015.

Primary school pupils from Aberdeen city, Aberdeenshire and the Highlands engaged in a multi-site TePL classroom virtual treasure hunt. The interactive event demonstrated and exemplified how shared learning can be enacted across many different classrooms simultaneously whilst also breaking down the geographical barriers between schools separated by distance. Teachers within the TePL network spoke about how they will continue to use the technology to share specialist resources such as language learning and major school events. They described the *Shared Learning Spaces* as invaluable and spoke about their multiple uses and purposes. The event provided us with confirmation that

TePL had contributed to creating the dynamic and shared understanding of classrooms without barriers or walls, and enabled shared spaces for learning which are safe and motivating for all - young learners, parents, pupils, students, teacher educators,

researchers and those who support their work including the Local Authorities though Development Officers, administrators and technical services. All had had a role to play in this ambitious and forward-looking initiative.

"... I think having that instant ability to share with others is wonderful, not just with the language side, but learning about culture and learning about individuals and being able to present to each other and ask each other questions, build up that relationship..."  
(Teacher)

"I think one day, if there was enough money, everybody should have a TePL ability built into their classroom" (Pupil)

"We should all be able to be tuned into one person who can give something, to all of these children if they were doing may be anything, it could be eco, it could be something for the future, when you think of it, all the green work that we do, it would only take one person to sit and explain to us and to show us and set tasks and the whole country would be motivated ... it could be very, very powerful" (Head teacher)

"That's where we open up the world of possibility ....ultimately when they become secondary children, from both the Chinese schools and from here, then we could visit, then they could go and work with each other, and so, TePL would be a stepping stone for a really life-changing experience for some of our pupils, who then got a chance to go and study in China for the term and the Chinese students to come and study here" (Head teacher)

**Note: an updated version of the Action plan /Milestones achieved is in Appendix 1 for outside monitoring and scrutiny.**

## 7.1 RECOMMENDATIONS

The following recommendations are indicators of the developmental phases of the initiative and enable us with some confidence to look forwards. TePL was ambitious in seeking to unite different educational sites with one goal: to build a community of connected educators to enable shared learning to take place which otherwise would not or could not have happened. There were many challenges and, as with all pioneering initiatives, the challenges provided us with opportunities to solve problems, to negotiate constraints or to rise above these. The overall success of TePL has given us the confidence to continue to develop the phenomenon of shared learning taking into account the following recommendations.

### Ten Recommendations

1. SLs are not seen as top down initiatives led by 'the university' or 'the Local Authority' but provide a genuine opportunity to **co-construct learning spaces** i.e. a dynamic community of practice of connected educators where participants volunteer to be pioneers and leaders of shared learning.
2. **Thematic development** is useful in the early stages to provide a focus for professional learning, classroom enquiry and research. However, from the start these must be shared and offer benefit for all participants.
3. TePL classrooms need careful attention paid to selection and **design** from different perspectives (e.g. physical space, technology, potential use, accessibility). JISC digital capability [http://repository.jisc.ac.uk/6611/1/JFL0066F\\_DIGIGAP\\_MOD\\_IND\\_FRAME.PDF](http://repository.jisc.ac.uk/6611/1/JFL0066F_DIGIGAP_MOD_IND_FRAME.PDF)
4. TePL **technology** must be carefully selected, installed, maintained and supported financially and technologically especially in terms of adding to basic equipment and adding new forms of digital tools as appropriate. A digital sub-group is to be recommended for this purpose.
5. The TEPL network needs appropriate **administrative support** to enable busy participants to plan, to timetable events and to explore connectivity.



6. Alternative **models of TePL classrooms** need to be pioneered especially those which offer mobile capability and those which may offer different connectivity, but which may be more economically viable.
7. Sustainability for shared ownership demands regular **reviews and ongoing evaluation** focussing on progress, lessons learned, ways forward and new ways of working. However, shared ownership is not the same as shared leadership and therefore roles and responsibilities need to be negotiated and transparent.
8. **Futures thinking** is fundamental for **sustainability**. This will meld a solid foundation of what works i.e. successful experiences with what the spaces might offer which has not yet been tried.
9. The TePL **research agenda** must be embedded into classroom practices from the very start. The need for all participants (including pupils) to engage in different kinds of research is critical for sustainability in terms of **providing evidence** from dissemination of impact and improvements made to learning and teaching.
10. Initiatives such as TePL need **time** to develop. SLS networks are complex. However, pioneers also need support to find time to share, to discuss and to engage fully. When expectations are too high or low, when involvement is inconsistent and when support is limited the network will not flourish. Neither is it sustainable if it depends on one or two individuals.  
To create a genuine distributed community of practice to bring about some enriched ways of learning which will make a difference to all those involved, requires **guidance, support, encouragement and of course evidence** of moving forwards. The final TePL report we hope will have provided some recommendations to achieve these in the future.

#### Our TePL Partners



#### Funded by



## 8 APPENDICES

### APPENDIX 1: TECHNOLOGY-ENHANCED PROFESSIONAL LEARNING ACTION PLAN VERSION [2] OCTOBER 2014

Interim Phase July 1 <sup>st</sup> 2013 – December 31 <sup>st</sup> 2013		Focus on setting up the framework for TePL work			
	Goal	Deliverables	Action by	Date	√
Organisation & Administration	Milestone [1.1]: To establish the infrastructure of TePL & initial <i>modus operandi</i>	<ul style="list-style-type: none"> <li>Design and Map TePL infrastructure</li> <li>Timetable Steering Group meetings with notes and action points</li> <li>Finalise contracts with SG</li> </ul>	DC & RA	1/2014	√
	Milestone [1.2]: To appoint key staff including from the UoA & each Local Authority	<ul style="list-style-type: none"> <li>Appointment: TePL Project Manager (UoA)</li> <li>Appointment: Learning Technologist (UoA)</li> <li>Designation of LA representatives: Steering Group level</li> </ul>	RA	2/2014	√
			DC	16/9/2013	√
			DC	9/12/2013	√
			DC	11/2013	√
			DC	8/2013	√

Interim Phase July 1 <sup>st</sup> 2013 – December 31 <sup>st</sup> 2013		Focus on setting up the framework for TePL work			
	Goal	Deliverables	Action by	Date	√
	<b>Milestone [1.3]: To select participatory schools across 3 LAs</b>	<ul style="list-style-type: none"> <li>• Identification of schools</li> <li>• Creation of initial network between schools</li> </ul>	DC DC	9/2013 9/2013	√ √
<b>Technology</b>	<b>Milestone [1.4]: To establish working processes with IS (UoA)</b>	<ul style="list-style-type: none"> <li>• Operationalise IT Project Team (UoA) with IS: PID, shared documentation, regular meetings and IT project management</li> </ul>	DC, IH, JL	2013	√
	<b>Milestone [1.5]: To select a company to install technology, via tendering processes</b>	<ul style="list-style-type: none"> <li>• Tender processes to appoint and contract company for installation of iTLOs</li> <li>• Plan installation of interactive classrooms, site visits &amp; trouble shooting</li> </ul>	DC, IH, JL IH, JL, RG, RA	23/12/2013 9/5/2014	√ √

Interim Phase July 1 <sup>st</sup> 2013 – December 31 <sup>st</sup> 2013		Focus on setting up the framework for TePL work			
	Goal	Deliverables	Action by	Date	√
Thematic Learning Spaces	Milestone [1.6]: To start to build the professional relationships in the learning community	<ul style="list-style-type: none"> <li>Delivery of initial TePL awareness-raising and Development Days with schools, LAs and university staff (Highlands and Aberdeen area)</li> <li>A record of outputs for the delivery days</li> </ul>	DC & team  DC & team	15/11/2013, 15/1/2014 & 22/1/2014 22/1/2014	√ √ √ √
	Milestone [1.7]: To identify and co-create themes as the driver for collaboration	<ul style="list-style-type: none"> <li>VLE space (My Aberdeen &amp; SharePoint) for the partnership (populated, interactive)</li> <li>Co-creation of themes, awareness about TePL, publish priorities</li> </ul>	RF/RA/RS  All TePL Partners	31/1/2014  22/1/2014	√  √
	Milestone[1.8]: To consider ethical protocols and permissions	<ul style="list-style-type: none"> <li>Exemplar permission letters for head teachers; IS protocols</li> </ul>	GI/RA/RS/C AM	2/2014	√

Interim Phase July 1 <sup>st</sup> 2013 – December 31 <sup>st</sup> 2013		Focus on setting up the framework for TePL work			
	Goal	Deliverables	Action by	Date	√
Research	Milestone [1.9]: To set up processes for organising over-arching research and impact on concept of Connected Educators	<ul style="list-style-type: none"> <li>Identification of PI and research team members</li> <li>Map of research plan identifying methodologies/approaches (action research, professional enquiry ...) and tools (PO, Ethnography, Questionnaires, and Focus Groups etc.)</li> </ul>	DC/RAB/RF	9/4/2014	√
	Milestone [1.10]: To start ethical approval at UoA	<ul style="list-style-type: none"> <li>Submission of ethical approval form</li> </ul>	DC/GI/RA/R S	9/5/2014	√
Sustainability & Future Development	Milestone[1.11]: Consider communications systems of different types	<ul style="list-style-type: none"> <li>Map of communication flows</li> <li>Interim draft report to SG</li> <li>Meet with SG/update</li> </ul>	RAB	30/4/2014	√
			DC/RAB	24/4/2014	√
			DC	2/5/2014	√
Dissemination	Milestone[1.12]: Systematise reporting to Scottish Government	<ul style="list-style-type: none"> <li>Review the TePL Action Plan</li> <li>Timetable SG reports</li> </ul>	DC/RA	26/4/2014	√
			RA	1/4/2014	√

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
Organisation & Infrastructure	Milestone [2.1] : To develop the infrastructure of TePL organisation	<ul style="list-style-type: none"> <li>Set up TDRG (Thematic Development and Research Group): roles and responsibilities for representation across TePL i.e. LAs, schools and university.</li> <li>Appoint LA development officers and establish their roles and ways of working</li> <li>Timetable and record taking of meetings for the above</li> <li>for footprint of development</li> <li>Create communication processes: Expansive Education</li> </ul>	RAB/DC  EK DS JM RAB  DC/RAB	2/2014  3/2/2014 25/8/2014 3/10/2014 ~  9/5/2014	√  √ √ √  √
	Milestone [2.2]: To develop the TePL identity	<ul style="list-style-type: none"> <li>Design TePL logo</li> <li>Create TePL website</li> <li>Design newsletter formats and publicity</li> </ul>	RAB/KL RAB RAB/DC/KL	28/3/2014 30/6/2014 2/4/2014	√ √ √



Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
Technology	Milestone [2.3]: Installation and snagging of technical equipment	<ul style="list-style-type: none"> <li>Installation of the technical equipment in all schools</li> <li>(inc. site visits, asbestos reports, agreements with IT providers and LA authorities re: firewalls, permissions etc.)</li> <li>Inventory of technological installation</li> </ul>	STREAMTEC LAs & Fujitsu Aberdeen City Aberdeenshire Highlands  RAB/RG	 25/4/2014 16/5/2014 21/8/2014 16/6/2014	 √ √ √ √

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
	<b>Milestone [2.4]: Training of teachers and university tutors to work in interactive classrooms (video and IWB)</b>	<ul style="list-style-type: none"> <li>Interactive Classroom training (plan, monitor and evaluate)</li> <li>Whiteboard training (STELJES: plan, monitor and evaluate)</li> </ul>	STREAMTEC  City & Shire Highlands STELJES City & Shire Highlands All authorities	  4/6/2014 26/9/2014  10/6/2014 11/6/2014 18/2/2015	  √ √  √ √ √
	<b>Milestone [2.5]: Completed and sign off from Streamtec</b>	<ul style="list-style-type: none"> <li>Legal Dept/tendering signed and payments including PID</li> </ul>	RG/DC/JL/R AB	30/8/2014	√
	<b>Milestone [2.6]: Agreement re: ongoing technological</b>	<ul style="list-style-type: none"> <li>University IS VS unit agreements</li> </ul>	DC/RAB/RG /	16/6/2014	√

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
	support and development with IS, including storage and protocols and JANET	<ul style="list-style-type: none"> <li>• Organisation of regular review meetings</li> <li>• Discussions with JANET</li> <li>• Ongoing telephone &amp; onsite technical support</li> </ul>	PM/LS RAB RG Streamtec	17/2/2014 8/9/2014 (Until) 5/3/2015	√ √ √
Thematic Learning Spaces	Milestone [2.7]: Establish Thematic Teams. Modus operandi and action plans and outcomes for current phase	<ul style="list-style-type: none"> <li>• Identify school leaders and theme leaders for 4 themes</li> <li>• Thematic leaders to engage all schools in their theme, to organise visits, discussions and a <i>modus operandi</i> for each individual theme including evaluation</li> </ul>	RS/RAB/GI/ CAM/DR/JS /DC	23/4/2014 30/6/2014	√ √

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	✓
	<b>Milestone [2.8]: Co –create a flexible approach/model to professional learning and Embed Expansive Education</b>	<ul style="list-style-type: none"> <li>Agree on a flexible approach to professional learning/ professional enquiry and research which is at both inter and intra-school level e.g. drawing on adapted Expansive Education Funnel, summarising key issues especially focussing on impact, from discussion with members</li> <li>Collaborative work between teachers, thematic leaders and development officers with agreed outcomes supported by a regular newsletter</li> </ul>	Whole TePL Team	30/6/2014	✓
			Whole TePL Team	30/6/2014	✓
<b>Research</b>	<b>Milestone [2.9] : Drawing on Milestone [1.9] activate the research team and action plan including initial base line data</b>	<ul style="list-style-type: none"> <li>Building blocks for embedding research, enquiry and extending collaboration: research leader and members of the research team</li> <li>Scoping the research and agreeing on design and approach to over-arching research for empirical study: publication of research plan</li> </ul>	GI/DC/DR/J S/RS	30/5/2014	✓
			GI/DC/DR/J S/RS	8/10/2014	✓

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
	<b>Milestone [2.10]: Put in place pre-requisites for the overarching theme e.g. final ethics approval</b>	<ul style="list-style-type: none"> <li>Data collection and progress report timetable</li> <li>Ethics approval granted</li> </ul>	RS/GI/RAB RAB/GI	16/5/2014 21/3/2014	√ √
<b>Sustainability &amp; Future Development</b>	<b>Milestone [2.11]: Ongoing evaluation of partnership work</b>	<ul style="list-style-type: none"> <li>Expansive Education review</li> </ul>	DC/RAB/GI/ RS/PM/GR/J S	20/6/2014	√
	<b>Milestone [2.12]: Setting up professional rewards for teacher users</b>	<ul style="list-style-type: none"> <li>Professional recognition: Master's level credits for users, GTCS professional recognition, Expansive Education recognition</li> </ul>	RS/DC/MB	27/8/2014	√
	<b>Milestone [2.13]: Setting up</b>	<ul style="list-style-type: none"> <li>Awards for pupils: badges, certificates, statements</li> </ul>	RAB/KL	30/9/2014	√

Phase One January 6 <sup>th</sup> 2014– June 30 <sup>th</sup> 2014		Focus on building the collaborative community and experimenting with new ways of working			
	Goal	Deliverables	Action by	Date	√
	rewards for pupils users	for profile			
Dissemination & Evaluation	Milestone [2.14]: Scope and timetable for dissemination and reporting to funders	• Early dissemination ( e.g. university website, local press)	RAB/RS/DC/ CAM	19/9/2014	√
		• Review the TePL Action Plan Phase 2 and 3	DC/RAB	26/9/2014	√
		• Interim Phase Report Scottish Government April 2014	DC/RAB	30/6/2014	√
		• Phase 1 Report to Scottish Government December 2014	DC/RAB	08/1/2014	√
		• <i>Note: All reports to include actual expenditure to date compared with profiled expenditure and may change to estimated expenditure for the financial year and/or the project as a whole, the reasons for any such changes and progress in achieving objectives/outcomes.</i>			
Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			



	Goals	Deliverables	Action by	Date	√
<b>Organisation &amp; Infrastructure</b>	<b>Milestone [3.1]: To review procedures and processes for effectiveness and appropriateness</b>	<ul style="list-style-type: none"> <li>Set up Advisory Group: roles and responsibilities including SG to enable 'detailed knowledge and understanding of progress'.</li> <li>System for monitoring different uses of SLS allocated responsibilities to groups (TDRG, AG, SG)</li> <li>Evaluation of procedures and processes (user audit and discussion groups) using groups (TDRG, AG, SG)</li> </ul>	DC/EK/NM/JM RAB/PM/DC/RG/RS/LS RAB/PM/D/ RG/RS	27/10/2014	√
				30/1/2015	√
				23/1/2015	√
<b>Technology</b>	<b>Milestone [3.2]: To critically evaluate the technological capability in terms of fitness for purpose and for further developments</b>	<ul style="list-style-type: none"> <li>Protocols &amp; guidance to enable continual dialogue between partners</li> <li>Publish guidance notes for users</li> <li>Data audit of digital technologies used for TePL</li> <li>Individual school technology reports</li> <li>Monitoring of overarching technology (site visits) with recommendations</li> <li>Additional training on VC &amp; IWB use</li> </ul>	RAB/RG/PM/LS/	23/1/2015	√
			RG/RAB/PM/LS	30/2/2015	√
			RG/RAB/PM	19/2/2015	√
				2/6/2015	√
			HR/GR/JM + Schools RG	30/6/2015	√
			GR/HR/RM/RAB	18/2/2015	√

Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			
	Goals	Deliverables	Action by	Date	√
Thematic Learning Spaces	Milestone [3.3]: Theme Team Action Plans – monitoring and evaluation	<ul style="list-style-type: none"> <li>Expansive Education network</li> <li>Publish action plans and proposed outputs</li> <li>Each theme team (e.g. according to the Funnel approach) monitors action plans supported by DOs and theme leaders</li> </ul>	TD&RG TD&RG TD&RG	24/10/2014 8/10/2014 16/2/2015	√ √ √
	Milestone [3.4]: Agreement of working protocols for working collaboratively in the SLS	<ul style="list-style-type: none"> <li>Agreed guidelines and protocols published</li> </ul>	RAB/DC/GI	31/1/2015	√

Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			
	Goals	Deliverables	Action by	Date	√
	<b>Milestone [3.5]:Thematic Development Days</b>	<ul style="list-style-type: none"> <li>Thematic Development Days to share ideas, to connect with Expansive Education and scoping new ways of working supported by newsletters. A series of link ups &amp; visits scheduled to undertake SLS work.</li> <li>Expansive Education master classes on action research for whole of TePL network &amp; beyond</li> </ul>	TD&RG/Theme Teams -Language, Literacies & Learning -Transitions -Creating Climates for Learning -Learning How Others Learn  DC/RB/Development Officers	23/6/2014 28/11/2014 27/8/2014 12/8/2014 8/10/2014 (SLS links scheduled throughout phase two) Nov 2014 – June 2015	√ √ √ √ √ √

Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			
	Goals	Deliverables	Action by	Date	√
	<b>Milestone [3.6]: Capacity building plan – extending the network</b>	<ul style="list-style-type: none"> <li>Introduction and integration of new users to TePL with new action plans for increasing impact including ASG academy feeders</li> </ul>	TD&RG/Theme Teams	30/1/2015	√
<b>Research</b>	<b>Milestone [3.7]: Carry out Connected Educators research</b>	<ul style="list-style-type: none"> <li>Discussion on measuring impact</li> <li>The overarching research plan to be activated to gather empirical data, evaluation data and user narratives</li> </ul>	GI/DC/DR/RAB/RS GI/DC/DR/AA/RS	23/1/2015 29/10/2014	√ √
	<b>Milestone [3.8]: Network in research terms</b>	<ul style="list-style-type: none"> <li>Put in place measurement of impact</li> <li>Data gathering use of SLS as integral part of initial teacher education in the university to bridge the gap between school-based &amp; university-based elements of the course</li> </ul>	GI/DC/RS GI/RS/DC	31/1/2015 3/4/2015	√ √

Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			
	Goals	Deliverables	Action by	Date	√
Sustainability & Future Development	Milestone [3.09]: Organising TePL resources	<ul style="list-style-type: none"> <li>A storage and resource bank with permissions and cataloguing systems for retrieval and use</li> </ul>	RAB/DC/RS/UK/PM	3/11/2014	√
	Milestone [3.10]: Ongoing evaluation of work in progress	<ul style="list-style-type: none"> <li>Review evaluation procedures</li> </ul>	DC/RAB/GI/RS	12/1/2015	√
	Milestone [3.11]: Publish sustainability plan (first version)	<ul style="list-style-type: none"> <li>Map out expansion of network and ways of building capacity and impact</li> </ul>	DC/RAB/RF/CM/RS	29/1/2015	√
	Milestone [3.12] Input and flow of new ideas for development and sustainability	<ul style="list-style-type: none"> <li>Organise meetings for scoping new ideas and developing concept of SLs, technological capabilities &amp; sustainability</li> </ul>	TD&RG	6/4/2015	√

Phase Two July 1 <sup>st</sup> 2014 – June 30 <sup>th</sup> 2015		Key developmental/experimental/operational phase with focus on evidence gathering for networked collaboration- connecting educators			
	Goals	Deliverables	Action by	Date	√
	<b>Milestone [3.13] New sites</b>	<ul style="list-style-type: none"> <li>Building on results of thematic work, data to be (at inter and intra levels) collected, analysed and reflected upon.</li> </ul>	DC/RS/GI	26/6/2015	√
<b>Dissemination &amp; Evaluation</b>	<b>Milestone [3.14]: Scope and timetable for dissemination</b>	<ul style="list-style-type: none"> <li>Organise Dissemination Plan e.g. planning networking opportunities e.g. conferences, professional events, academic events, parents evenings.</li> </ul>	RS/DC/CAM/RC	30/6/2015	√
	<b>Milestone [3.15]:Evaluation of Phase 2</b>	<ul style="list-style-type: none"> <li>Review TePL Action Plan Phase 3</li> <li>Phase Two Interim Report to Scottish Government April 2015</li> </ul>	DC/RAB DC/RAB	30/6/2015 30/4/2015	√ √

Phase Three 1 <sup>st</sup> July 2015 – 31 <sup>st</sup> December 2015		Focus on dissemination, networking and futures thinking			
	Goal	Deliverables	Action by	Date	√
Organisation & Infrastructure	<b>Milestone [4.1]:</b> Recommendations for effective working	Final report detailing recommendations and guidelines for network infrastructure and organisation	RAB/DC	3/8/2015	√
Technology	<b>Milestone [4.2]:</b> Recommendations maximising technology enhancement	Final report detailing recommendations and final guidelines for SLS and networked digital tools	PM/RG/DC	25/8/2015	√
Thematic Learning Spaces	<b>Milestone [4.3]:</b> Report on the TePL Themes	<ul style="list-style-type: none"> <li>Publication of thematic report</li> </ul>	TD&RG	25/9/2015	√
	<b>Milestone[4.4]</b> Report on SLS uses	<ul style="list-style-type: none"> <li>Final report describing different uses e.g. 'Exploration and development of the application of SLSs based working in teacher induction and career-long professional development'</li> </ul>	TD&RG	25/10/2015	√

<b>Research</b>	<b>Milestone [4.5]</b> Research and dissemination of findings and impact of the initiatives'/Research outputs	<ul style="list-style-type: none"> <li>• Conference attendance</li> <li>• Media coverage</li> <li>• Research networks</li> <li>• New initiatives</li> </ul>	DC/CAM/GI/ RS/DR/JS	30/11/2015	√
				3/11/2015	√
				1/12/2015	√
				1/12/2015	√
	<b>Milestone [4.6]:</b> Embedding TePL in Professional Learning	Establishing M level courses and professional enquiry research within schools	RAB/RS/DC	1/10/2015	√
<b>Dissemination &amp; Evaluation</b>	<b>Milestone [4.7]:</b> Dissemination on a local, regional, national and international stage  <b>Milestone [4.8]:</b> Launch of sustainable TePL network	<ul style="list-style-type: none"> <li>• Final dissemination/impact events</li> <li>• Final TePL Report to SG (December 2015) summarising TePL outcomes and performance of the Project supported by statistical analysis and other data as shall be required by the Scottish Ministers</li> </ul>	Whole team	1/12/2015	√
				1/12/2015	√

#### KEY

~ = Ongoing



## APPENDIX 2: CALENDAR OF KEY EVENTS FOR TEPL 2014/2015

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
1.	University of Aberdeen & Middleton Park	24 <sup>th</sup> February 2014	0900-0930	<b>LHOL</b> course conversation about the learning environment	Learning How Others Learn	1 of 1	1 teacher + 10 pupils (Middleton Park) 50 student teachers + 5 lecturers	Audio Visual team, UoA  <b>Total= 65 ppl</b>	Yes, email. See gathering the evidence document.
2.	Danestone Primary & University of Winchester	2 <sup>nd</sup> October 2014	1530-1630	An introduction to Expansive Education and the action research approach	N/A	1 of 1	30 teachers + 4 EED staff members	Gordon Rae  <b>Total= 35 ppl</b>	

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
3.	University of Aberdeen linking to:  1. Turriff Academy – Claire Barrie's Modern Studies class  2. Danestone Primary – Emma Beattie's Mandarin class 3. Middleton Park – Talking to Jenny Watson 4. Millburn Academy – Talking to Neil Grant, Heather Stirling & Holly Ross about the TePL initiative	30 <sup>th</sup> October 2014	1030-1230	To demonstrate the TePL equipment to John Gunstone, Scottish Government so that he could hear a range of views from people involved in the initiative	N/A (demonstration of TePL for funders)	1 of 1	John Gunstone Do Coyle Gabrielle Ivinson Emma Beattie +pupils (Danestone) Claire Barrie (Turriff Academy) Jenny Watson (Middleton Park) Neil Grant & Heather Stirling (Millburn Aadeemy) Holly Ross (Highland Development Officer)	Ramone Al Bishawi Gordon Rae          <b>Total = 32 ppl</b>	These links were recorded so video evidence can be obtained.
4.	Danestone/ Lochyside	31 <sup>st</sup> October 2014	1110 - 1200	3Ls/ Teach Mandarin 1-10 and greetings	Language, Literacies, and Learning (3Ls)	1 of 4	Diane Toet Lynette Martin Moira Murphy + pupils	Holly Ross Gordon Rae Anne Thomson Katrina Foy + pupils <b>Total=57 ppl</b>	Members of the 3Ls team (Katrina Foy & Anne Thomson) conducted a feedback session

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
5.	University of Aberdeen Middleton Park Primary Bun-sgoil Primary	4 <sup>th</sup> November 2014	0930-1030	<b>Language, Literacies &amp; Learning</b> meeting. To discuss plans for the Middleton Park link with Bun-sgoil	Language, Literacies, and Learning (3Ls)	1 of 1	Anne Thomson Anne Thirkell Katrina Foy Kirsty MacVicar Audrey Young Val Struthers	Ramone Al Bishawi  <b>Total = 7 ppl</b>	This link was recorded so video evidence can be obtained.
6.	University of Aberdeen Turiff Academy	4 <sup>th</sup> November 2014	1530-1640	<b>Creating Climates for Learning</b> – Secondary School Strand & video conferencing training	Creating Climates for Learning	1 of 1	Susan Ramsden George Baird Claire Barrie Gabrielle Iverson	Ramone Al Bishawi Gordon Rae <b>Total= 6ppl</b>	This link was recorded so video evidence can be obtained.
7.	Middleton Park Bunsgoil Primary	4 <sup>th</sup> November 2014	2-2.30pm	Test call	Language, Literacies, and Learning (3Ls)	1 of 1	Kirsty MacVicar Val Struthers Audrey Young	Holly Ross Gordon Rae <b>Total = 5 ppl</b>	This was not recorded evidence would need to be obtained from participants.
8.	Danestone/ Lochyside	7 <sup>th</sup> November 2014	1110 - 1200	3Ls/ Mandarin Bingo	Language, Literacies, and Learning (3Ls)	2 of 4	Diane Toet Lynette Martin Moira Murphy +pupils	Holly Ross Gordon Rae Anne Thomson Katrina Foy <b>Total= 57 ppl</b>	Caroline Duncan to attend linkup with Danestone for the 3rd & 4 <sup>th</sup> link up)

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
9.	Middleton Park/ Bunscoil	11 <sup>th</sup> November 2014	2-2.45pm	<b>3Ls Storytelling Stone Soup.</b> Greet in Gaelic & Grace Banks (storyteller) to share the story of the stone soup with both classes. The classes will create a version of story & teaching each other to count to 10 in Middleton Park students to learn Stone Soup in Gaelic.	Language, Literacies, and Learning (3Ls)	1 of 2	Kirsty MacVicar Val Struthers Audrey Young Grace Banks (Storyteller)	Holly Ross Gordon Rae Anne Thirkell Pauline Brown  <b>Total= 58 ppl</b>	This link was recorded so video evidence can be obtained.
10.	Millburn – Room 156	19 <sup>th</sup> November 2014	1350-1405	Neil Grant conducting a test of recording his maths lesson.	Creating Climates for Learning	1 of 2	Neil Grant + 25 pupils	<b>Total = 26 ppl</b>	This test was recorded so video evidence can be obtained.
11.	Millburn – Room 156	19 <sup>th</sup> November 2014	1600-1615	Neil Grant conducting a test of recording his maths lesson.	Creating Climates for Learning	1 of 2	Neil Grant	<b>Total = 1 ppl</b>	This test was recorded so video evidence can be obtained.
12.	University of Aberdeen Danestone Primary	4 <sup>th</sup> December 2014	0930-0955	<b>PGDE Modern Foreign Languages</b> student teachers link to Danestone to observe teacher delivering Mandarin lesson	Language, Literacies, and Learning (3Ls)	1 of 5	Anne Thomson Lynnette Martin Ellen 20 student teachers 25 pupils	Ramone Al Bishawi Gordon Rae Ruth MacKenzie Linda Stephen	This link was recorded but VScene lost this. Feedback can also be obtained from student teachers.

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
								<b>Total = 60 ppl</b>	
13.	University of Aberdeen Danestone Primary	4 <sup>th</sup> December 2014	1000-1050	<b>PGDE Modern Foreign Languages</b> student teachers micro teach Mandarin to their peers.	Language, Literacies, and Learning (3Ls)	2 of 5	Anne Thomson 20 student teachers	Ramone Al Bishawi Gordon Rae Ruth MacKenzie Linda Stephen <b>Total = 25 ppl</b>	This link was recorded so video evidence can be obtained.
14.	University of Aberdeen	4 <sup>th</sup> December 2014	1050-1105	Anne Thomson provides her student teachers with feedback	Language, Literacies, and Learning (3Ls)	3 of 5	Sheila Nutkins Pauline Brown Anne Thomson 20 student teachers	Ramone Al Bishawi Gordon Rae Ruth MacKenzie Linda Stephen <b>Total = 25 ppl</b>	This link was recorded so video evidence can be obtained.
15.	University of Aberdeen	4 <sup>th</sup> December 2014	1109-1149	<b>PGDE Modern Foreign Languages</b> student teachers micro teach French to their peers.	Language, Literacies, and Learning (3Ls)	4 of 5	Sheila Nutkins Pauline Brown Anne Thomson 20 student teachers	Ramone Al Bishawi Gordon Rae Ruth MacKenzie Linda Stephen <b>Total = 25 ppl</b>	This link was recorded so video evidence can be obtained.
16.	University of	4 <sup>th</sup> December	1156-1242	<b>PGDE Modern Foreign</b>	Language,		Sheila Nutkins	Ramone Al	This link was

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
	Aberdeen	2014		<b>Languages</b> student teachers micro teach Spanish to their peers.	Literacies, and Learning (3Ls)		Pauline Brown Anne Thomson 20 student teachers	Bishawi Gordon Rae Ruth MacKenzie Linda Stephen  <b>Total = 25 ppl</b>	recorded so video evidence can be obtained.
17.	Bun-sgoil Primary Middleton Park Primary	10 <sup>th</sup> December 2014	1130-1215	Classes within the two primary schools teach each other Christmas songs in Gaelic & French	Language, Literacies, and Learning (3Ls)	1 of 1	Audrey Young Val Struthers Kirsty MacVicar 50 pupils	Ramone Al Bishawi Holly Ross  <b>Total= 55 ppl</b>	This link was recorded so video evidence can be obtained.
18.	University of Aberdeen Clerkhill Primary School Middleton Park Primary Danestone Primary	11 <sup>th</sup> December 2014	1552- 1715	<b>Expansive Education Masterclass</b> with Bill Lucas	Expansive Education seminar	1 of 5	University of Aberdeen – 7 Turriff Academy – 5 Clerkhill – 5 Millburn – 7	     <b>Total = 24 ppl</b>	This link was recorded so video evidence can be obtained.
19.	Danestone/Dunnottar	21 <sup>st</sup> November 2014	0900-0915	Test call in preparation for the 3Ls Mandarin/French link	Language, Literacies, and Learning (3Ls)	1 of 2	Lynnette Martin Caroline Duncan	Ramone Al Bishawi  <b>Total= 3 ppl</b>	
20.	University of Aberdeen Turriff Academy	19 <sup>th</sup> January 2015	1600-1658	<b>New Year's Evaluative Meeting</b> TePL staff engage	Overarching/Shared Learning Spaces (SLS)	1 of 1	Neil Grant Heather Stirling Audrey Young	Ramone Al Bishawi Gordon Rae	This link was recorded so video

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
	Middleton Park Clerkhill Primary Millburn Academy			teachers in a feedback session about the links that have taken place so far.	research		Val Struthers Susan Ramsden George Baird	Ruth MacKenzie  <b>Total= 9 ppl</b>	evidence can be obtained.
21.	Millburn Academy	20 <sup>th</sup> January - 30 <sup>th</sup> January 2015	0900-1500	Jennifer Malone, student teacher on placement in Millburn, filmed her lessons so they could be reviewed by her mentor Heather Stirling. S3 lesson on sexual reproduction, possibly moving into genetics.	Creating Climates for Learning	1 of 1	Jennifer Malone Heather Stirling	Ramone Al Bishawi Gordon Rae Holly Ross Gabrielle Ivinson  <b>Total=6 ppl</b>	Some of the recordings were unsuccessful due to technical issues with the Highland equipment
22.	University of Aberdeen Turrieff Academy Danestone Primary Millburn Academy	21 <sup>st</sup> January 2015	1554-1651	<b>Expansive Education Masterclass</b> with Bill Lucas – Creating a climate for learning	Expansive Education seminar	2 of 5	University of Aberdeen – 10 Danestone – 15 Turrieff – 6 Millburn – 17	Ramone Al Bishawi Gordon Rae  <b>Total = 38 ppl</b>	This link was recorded so video evidence can be obtained.
23.	Bun-Sgoil Middleton Park Primary	28 <sup>th</sup> January 2015	1400-1500	<b>Bho Paris gu Harris</b> (Paris meets Harris) – Salutations & Food. Classes demonstrate and teach each other Gaelic & French.	Language, Literacies, and Learning (3Ls)	1 of 3	Kirsty MacVicar Pauline Brown Val Struthers Audrey Young	Holly Ross  <b>Total= 5 ppl</b>	This link was recorded so video evidence can be obtained.

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
24.	University of Aberdeen Dunnottar Primary Millburn	2 <sup>nd</sup> February 2015	1130-1200 & 1400-1442	<b>Learning How Others Learn</b> in this link student teachers had the opportunity to speak to children in their classroom via the TePL technology. The children introduced the schools and described what they liked about it.	Learning How Others Learn	1 & 2 of 10	Caroline Duncan + 25 Neil Grant + 15 Catriona MacDonald Dean Robson Mhairi Freeman Lynne Shiach + 100 student teachers	Ramone Al Bishawi Gordon Rae  <b>Total=146 ppl</b>	These links were recorded so video evidence can be obtained.
25.	University of Aberdeen Danestone Primary Dunnottar Primary	9 <sup>th</sup> March 2015	1130 – 1200 & 1405 - 1423	<b>Learning How Others Learn</b> in this link student teachers had the opportunity to talk to parents & children about their eco committee via the TePL technology.	Learning How Others Learn	5 & 6 of 10	Caroline Duncan+ 25 + 7 parents Diane Toet & Alison Gow + 25 Catriona MacDonald Dean Robson Mhairi Freeman Lynne Shiach + 100 student teachers	Ramone Al Bishawi Gordon Rae  <b>Total =166 ppl</b>	This link was recorded so video evidence can be obtained
26.	University of Aberdeen Lochyside Primary Clerkhill	10 <sup>th</sup> February 2015	1230-1300 1615-1645	To prepare for the remote interactive whiteboard training being delivered by Steljes 18.2.2015	N/A Whole TePL Network	1 of 1	Technician at Lochyside	Holly Ross Ramone Al Bishawi Gordon Rae Ruth Mackenzie  <b>Total= 5 ppl</b>	These links were recorded so video evidence can be obtained.
27.	University of	12 <sup>th</sup> February	0900-0952	Do Coyle & her student	Language,	1 of 1	Do Coyle	Gordon Rae	These links



Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
	Aberdeen Danestone Primary	2015	& 1000-1047	teachers link with P3/4 classes to watch their Mandarin lessons	Literacies, and Learning (3Ls)		Lynnette Martin + 25 pupils + 100 student teachers	<b>Total=128 ppl</b>	were recorded so video evidence can be obtained.
28.	University of Aberdeen Danestone Primary Lochyside Primary Millburn Academy	18 <sup>th</sup> February 2015	1300-1551	Interactive whiteboard training was delivered remotely through the TePL technology to schools throughout the network	N/A Whole TePL Network	1 of 1	Danestone 25 Lochyside 7 Millburn 5	Holly Ross Ramone Al Bishawi Gordon Rae Ruth Mackenzie  <b>Total= 41 ppl</b>	This link was recorded so video evidence can be obtained.
29.	University of Aberdeen Danestone Primary Dunnottar Primary Lochyside Primary	19 <sup>th</sup> February 2015	0930--0945	Danestone's P2 class delivered the story of the Chinese zodiac animals in English & Mandarin	Language, Literacies, and Learning (3Ls)	1 of 1	University of Aberdeen 15 Danestone 25 Dunnottar 25 Lochyside 15	Holly Ross Ramone Al Bishawi Gordon Rae Ruth Mackenzie  <b>Total= 80 ppl</b>	This link was recorded so video evidence can be obtained.
30.	University of Aberdeen Danestone Primary	19 <sup>th</sup> February 2015	1015 - 1040	<b>PGDE Modern Foreign Languages</b> student teachers teach German to pupils in Danestone.	Language, Literacies, and Learning (3Ls)	1 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi Gordon Rae  <b>Total= 42 ppl</b>	This link was recorded so video evidence can be obtained.

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
31.	University of Aberdeen Lochyside Primary	19 <sup>th</sup> February 2015	1045-1115	<b>PGDE Modern Foreign Languages</b> student teachers teach French to pupils in Lochyside.	Language, Literacies, and Learning (3Ls)	2 of 5	University of Aberdeen 15 Lochyside 25	Ramone Al Bishawi Gordon Rae  <b>Total= 42 ppl</b>	This link was recorded so video evidence can be obtained
32.	University of Aberdeen Danestone Primary	19 <sup>th</sup> February 2015	1135 - 1200	<b>PGDE Modern Foreign Languages</b> student teachers teach French to pupils in Danestone.	Language, Literacies, and Learning (3Ls)	3 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi Gordon Rae  <b>Total= 42 ppl</b>	This link was recorded so video evidence can be obtained
33.	University of Aberdeen Danestone Primary	19 <sup>th</sup> February 2015	1315 - 1340	<b>PGDE Modern Foreign Languages</b> student teachers teach Spanish to pupils in Danestone.	Language, Literacies, and Learning (3Ls)	4 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi Gordon Rae  <b>Total= 42 ppl</b>	This link was recorded so video evidence can be obtained
34.	University of Aberdeen Danestone Primary	19 <sup>th</sup> February 2015	1415 - 1440	<b>PGDE Modern Foreign Languages</b> student teachers teach Spanish to pupils in Danestone	Language, Literacies, and Learning (3Ls)	5 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi Gordon Rae  <b>Total= 42 ppl</b>	This link was recorded so video evidence can be obtained

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
35.	University of Aberdeen Millburn Academy Danestone Primary	23 <sup>rd</sup> February 2015	1135 – 1200 & 13301415	<b>Learning How Others Learn</b> in this link student teachers had the opportunity to watch children in their classroom via the TePL technology. The students focused on emotions, conventions and relationships.	Learning How Others learn	3 & 4 of 10	Heather Stirling + 25 Danestone + 25 Catriona MacDonald Dean Robson Mhairi Freeman Lynne Shiach + 100 student teachers	Ramone Al Bishawi Gordon Rae  <b>Total = 156 ppl</b>	This link was recorded so video evidence can be obtained
36.	Danestone Primary Dunnottar Primary	27 <sup>th</sup> February 2015	1115 - 1135	<b>3 Ls link.</b> Pupils teach each other French & Mandarin	Language, Literacies, and Learning (3Ls)	1 of 3	Diane Toet Lynnette Martin Caroline Duncan + 1 + 50 pupils	   <b>Total= 53 ppl</b>	This link was recorded so video evidence can be obtained
37.	University of Aberdeen Millburn Academy Clerkhill Primary (pre-recorded lesson)	2 <sup>nd</sup> March 2015	1320 - 1349	<b>Learning How Others Learn</b> in this link student teachers had the opportunity to watch children in their classroom via the TePL technology. Focus: Environments for learning	Learning How Others Learn	5 & 6 of 10	Heather Stirling + 25 Jane Harrison + 25 Catriona MacDonald Dean Robson Mhairi Freeman Lynne Shiach + 100 student teachers	Ramone Al Bishawi Gordon Rae  <b>Total = 156 ppl</b>	This link was recorded so video evidence can be obtained

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
38.	University of Aberdeen Danestone Primary Millburn Academy Northfield Academy	2 <sup>nd</sup> March 2015	1545 - 1645	<b>Transitions planning meeting.</b>	Transitions for Expansive Learning	1 of 1	Jennifer Spratt Sheila Nutkins Gordon Rae Ruth MacKenzie Neil Grant Heather Stirling Diane Toet Alison Gow	Ramone Al Bishawi  <b>Total= 9 ppl</b>	This link was recorded so video evidence can be obtained
39.	University of Aberdeen Turiff Academy	5 <sup>th</sup> March 2015	0952-1030 & 1050 - 1140	<b>VC training and Creating Climates for Learning.</b> 2 X Higher pupil feedback	Creating Climates for Learning	1 of 1	Susan Ramsden Claire Barrie George Baird + 1 Ruth MacKenzie Claire Molloy + 20 pupils	Ramone Al Bishawi Gordon Rae  <b>Total=28 ppl</b>	These links were recorded so video evidence can be obtained.
40.	Danestone Primary Dunnottar Primary	6 <sup>th</sup> March 2015	1115 - 1135	<b>3 Ls link.</b> Pupils teach each other French & Mandarin.	Language, Literacies, and Learning (3Ls)	2 of 3	Diane Toet Lynnette Martin Caroline Duncan + 1 + 50 pupils	  <b>Total= 54 ppl</b>	This link was recorded so video evidence can be obtained
41.	University of Aberdeen Danestone Primary Dunnottar Primary	9 <sup>th</sup> March 2015	1130 – 1200 & 1405 - 1423	<b>Learning How Others Learn</b> in this link student teachers had the opportunity to talk to parents & children about their eco committee via the TePL technology.	Learning How Others Learn	5 & 6 of 10	Caroline Duncan+ 25 + 7 parents Diane Toet & Alison Gow + 25 Catriona MacDonald Dean Robson Mhairi Freeman Lynne Shiach + 100 student teachers	Ramone Al Bishawi Gordon Rae  <b>Total =166 ppl</b>	This link was recorded so video evidence can be obtained
42.	Danestone Primary	12 <sup>th</sup> March	0925 -0945	<b>3 Ls link.</b> Pupils teach	Language,	3 of 3	Diane Toet		This link was

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
	Dunnottar Primary	2015		each other French & Mandarin.	Literacies, and Learning (3Ls)		Lynnette Martin Caroline Duncan + 1 + 50 pupils	<b>Total = 54 ppl</b>	recorded so video evidence can be obtained
43.	Millburn Academy	25 <sup>th</sup> March	1000-1300	<b>Showcasing TePL to Head of Education, Highland Council</b>	N/A TePL sustainability	1 of 1	Heather Stirling Holly Ross Elaine Kirkham Jim Steven + 25 pupils	<b>Total = 29 ppl</b>	Link was not recorded
44.	Dunnottar Primary	27 <sup>th</sup> March 2015	1105 - 1215	Filming a probationer teacher to analyse own practice after lesson	Creating a Climate for Learning	1 of 1	Probationer Mentor + 25	Gordon Rae  <b>Total= 27 ppl</b>	This link did not record
45.	University of Aberdeen Millburn Academy	1 <sup>st</sup> April 2015	1600 - 1700	Meeting about the STEM project with Gavin McLean, HT Millburn Academy.	N/A TePL sustainability meeting	1 of 1	Do Coyle Gabrielle Ivanson Gavin McLean	Holly Ross  <b>Total= 3 ppl</b>	This link was recorded so video evidence can be obtained
46.	Millburn Academy University of Aberdeen	28.4.2015	1330-14.30	Linking to watch Neil Grant's maths lesson – S2s	N/A bringing more SoE staff on board	1 of 1	Helen Martin + 4 students Neil Grant + 25 pupils	Ramone Al Bishawi  Total= 32	This link was recorded so video evidence can be obtained

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
47.	University of Aberdeen Millburn Academy	30 <sup>th</sup> April 2015	1000-1030	<b>PGDE Modern Foreign Languages</b> student teachers teach Spanish to pupils in Millburn Primary (S2)	Language, Literacies, and Learning (3Ls)	1 of 5	University of Aberdeen 15 Millburn 25	Ramone Al Bishawi Holly Ross  <b>Total= 41ppl</b>	This link will be recorded so video evidence can be obtained
48.	University of Aberdeen Danestone Primary	30 <sup>th</sup> April 2015	1115-1145	<b>PGDE Modern Foreign Languages</b> student teachers teach French to pupils in Danestone Primary (P7)	Language, Literacies, and Learning (3Ls)	2 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi  <b>Total= 41 ppl</b>	This link will be recorded so video evidence can be obtained + a feedback session will be conducted
49.	University of Aberdeen Danestone Primary	30 <sup>th</sup> April 2015	1200-1230	<b>PGDE Modern Foreign Languages</b> student teachers teach German to pupils in Danestone Primary (P5)	Language, Literacies, and Learning (3Ls)	3 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi  <b>Total= 41 ppl</b>	This link will be recorded so video evidence can be obtained + a feedback session will be conducted
50.	University of Aberdeen Danestone Primary	30 <sup>th</sup> April 2015	1330-1400	<b>PGDE Modern Foreign Languages</b> student teachers teach German to pupils in Danestone Primary (P3/4)	Language, Literacies, and Learning (3Ls)	4 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi  <b>Total= 41 ppl</b>	This link will be recorded so video evidence can be obtained + a feedback session will be conducted

Link no.	Which sites linked up?	When	Time	What was the purpose?	TePL Theme	Session x of y	Who was involved?	Who supported the link?	Is there any feedback from this link?
51.	University of Aberdeen Dunnottar Primary	30 <sup>th</sup> April 2015	1430-1500	<b>PGDE Modern Foreign Languages</b> student teachers teach Mandarin to pupils in Dunnottar Primary (P6)	Language, Literacies, and Learning (3Ls)	6 of 5	University of Aberdeen 15 Danestone 25	Ramone Al Bishawi  <b>Total= 41 ppl</b>	This link will be recorded so video evidence can be obtained + a feedback session will be conducted

## APPENDIX 3 THEMATIC REPORTS

# Learning how others learn: Report July 2015

**Thematic Coordinator & Team Leader: Catriona MacDonald**

### Course Aims

Students are provided with the opportunity to broaden knowledge and deepen understanding of the interdependency of learning in family, community and school and the influences on young learners. Developing skills of collaborative critical enquiry students investigate learning experiences and how a 'Climate for Learning' may be created in a Primary Classroom.

The key knowledge and understanding, skills and attitudes that students should develop during this course are:

- Develop knowledge and understanding of theories relating to learning with a specific focus on young learners in the family, school and community.
- Extend collaborative skills through working with school professionals
- Engage in and act upon personal and professional reflection.
- Further develop presentation skills
- Further develop communication skills
- Apply relevant theory to practice
- Develop and be able to justify their personal stance on learning and education supported by evidence from theory and practice

Discussion focuses on the following key areas of collaborative enquiry:

- Communication
- Relationships – with familiar adults, with peers and with adults in formal roles
- Emotions/ Feelings
- Environment
- Social Conventions



## Key Objectives

How TePL (SLS) scaffolds and supports the engagement and learning of all participants (children, tutors, students, and teachers) within a University course working with students who are in year one of the MA (Hons) Education programme?

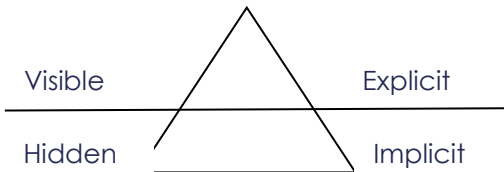
How do live links support developing knowledge and understanding of aspects of a positive climate for learning?

How do live links support engagement with collaborative enquiry?

## Observations of Practice

A key part of the learning experience for students is achieved through observation, discussion and reflection of practice. Students will have their own prior experiences, knowledge and understanding and attitudes. This course will give provide opportunities to challenge and question prior knowledge and attitudes.

## Development over time

Stage 1 Key events	
Development of partner schools and school contacts alongside the Development officers. School supported to construct and utilise the equipment and focus on how the theme may be developed in the context of school learning environment. The agreed sessions/observations took place:	
<b>11.03.14:</b> Introduction to Professional Dialogue and Learning Conversations. . Who with? Who can give an insight to school and community?	Who do you have learning conversation/professional dialogue with? Workshop within the MacRobert building.
<b>17.03 .14</b> What is a school? Looking at video created by Pupils at Middleton Park. Pupils introduce their school community.	

<b>24.02.14 Link with Dunnottar Primary</b> What are the important values and beliefs in our classrooms? How are these developed? Importance of communication and relationships. Observation of how the teacher and pupils communicate in the classroom environment.
<b>3.3.14 Link with Middleton Park</b> Creating a climate for learning What does a learning environment look like? Who are the learners? How may learning be supported? What challenges may there be?
We had hoped for further sessions but technology issues in the early stages prevented these from taking place.

<b>Stage 2 Key events</b>
Development from initial contacts. Identification of schools. School links to Dunnottar, Middleton Park, Danestone, Clerkhill and Millburn. Inputs negotiated and identified with schools. Building on identified course themes.
<b>02.02. 15</b> Dunnottar and Millburn Getting to know the school and its: Focus on introduction of the school by the pupils.
<b>23.02 15</b> Recording by Clerkhill teacher lesson Phonics. Linking to other themes. Observation of class teaching: focus on relationships, social conventions and respect
<b>03.02.15</b> Students make connections to pupil groups through GLOW. This is an ongoing weekly activity designed to enable collaborative discussion of learning. 4 classes connect with the 4 tutorial groups, students and pupils sharing learning experiences at times that suit their contexts. Develop the skills to: <ul style="list-style-type: none"> <li>&gt; identify, discuss and reflect on their own evidence of learning</li> <li>&gt; use appropriate language for self-evaluation</li> <li>&gt; take responsibility for managing their own learning</li> </ul> <ul style="list-style-type: none"> <li>&gt; help to plan their own next steps in learning and set their own learning goals</li> <li>&gt; make informed choices and decisions about their future learning</li> </ul>
<b>02.03.15</b> Millburn and Danestone. Observation of physical learning environments: What does a learning environment look?
<b>On completion of this stage students were asked to complete a survey to give evidence if the key objectives were</b>

met.

### Stage 3 Key events

Planning for the next stage is taking place and this development stage has been informed by feedback received from teachers, tutors, development officers and students. Meetings with teaching staff will take place before the course recommences in January 2016. These will be a mixture of F2F and through TePL links.

## Outcomes

### Reflection on our objectives:

- 1. How TePL (SLS) scaffolds and supports the engagement and learning of all participants (children, tutors, students, and teachers) within a University course working with students who are in year one of the MA (Hons) Education programme?**

*(Data was gathered through evaluations, student survey, interviews of teachers, development officer feedback, academic staff observations and reflections) The data set is small, 18 students responded to the survey.*

The responses were on the whole positive.

- Live Links support learning: Comments included:

*'The live links allowed us to experience first-hand different scenarios in a school which was very useful.'*

*'The children were willing to participate in the live links and provided valuable information. Parents and teachers also contributed to the live links well.'*

- Live links particularly supported exemplification of the themes of communication and relationships
- Evidence from live link feedback suggests pupils were developing the Four Capacities. E.g. *'They were able to work collaboratively and get their points across. They were able to present information successfully to an audience. They all participated in the encounter. They all behaved appropriately in front of the camera.'*

## **2. How do live links support developing K&U of aspects of a positive climate for learning?**

- The live links were seen as supporting understanding of how a climate for learning may be created. Comments included:

*'Not having placement in first year didn't hinder our experience as we were able to view classroom practice in an informative way through the live links. It also allowed us to see many things from different perspectives and therefore probably gained more experience in the sense that the video could be replayed.'*

*'I thought it was important how positive and encouraging the teacher was when interacting with the children and even talking to us in front of the children.'*

*'The children were willing to participate in the live links and provided valuable information. Parents and teachers also contributed to the live links well.'*

## **3. How do live links support engagement with collaborative enquiry?**

- Recognition of the importance of collaborative enquiry to development of knowledge and understanding was clearly evident in student assessments Further to this some students comment in the survey:

*'The links allowed me to see teaching in action and how the five key themes - communication, environment, relationships, social conventions and emotions/feelings - are involved in the teaching process. The links also let me view collaborative enquiry while the children were learning which showed how important it is.'*

*'The children were willing to participate in the live links and provided valuable information. Parents and teachers also contributed to the live links well.'*

## **Issues and comments**

1. Engagement with GLOW was not as successful as hoped. The majority of pupils did not respond as hoped. It may be something that we can look at in future and find a link with a specific school/class initially who are enthusiastic about connecting pupils with students as part of their pupil reflection and evaluation.
2. The tutorial groups were large and this was intimidating for some students. However, by developing a clear structure and supporting the students to build confidence this was overcome. We need to continue with this scaffolding approach.
3. Teachers appeared to have developed very structured lessons. In future we need to develop teacher confidence to enable us to view 'normal' classroom experiences. Where this happened, it was very successful.
4. Teacher wanted feedback and while this is an issue because of identification of how this may happen, it is important for this to be routine and part of the development for all partners in TePL.
5. Due to technology issues and school commitments some pre-recorded videos were used. These were very successful. The response from students to pre-recorded session was positive.
6. The majority of responses were positive, it was felt unanimously that TePL developed understanding and skills that need to be further developed with school placement.

**Thematic report prepared by Catriona MacDonald**

## **Transitions for Expansive learning: Report July 2015**

**1. Aims and Objectives:**

- To examine how technologies can be used to further understanding of key educational transitions
- To use technologies as a means of enhancing pupil voice in our understanding and managing transitions
- To share learning between participating schools, using appropriate technologies

**2. Development over time**

Throughout the phases outlined below meetings were conducted between the university and the participating schools using the TePL technology, and where appropriate face-to-face meetings were held.

The 'stages' outlined below are not linear. For example, due to some attrition and some later recruitment of schools, stage 1 was revisited after stage 2 had begun. At the time of writing, some schools are into stage 3 while others are working in stage 2.

**a) Stage 1: Framing the project**

The first stage in the project involved developing conceptual clarity about the term transitions and to determine the purposes of a shared project in this area. The following excerpt outlines the shared purposes at the start of the study.

The word transition refers to making a change. The sorts of transitions that are of interest to educationalists are those that take place when children and young people, teachers, student teachers or others move to new settings or perhaps take on new roles. These might include: starting school; nursery to P1; primary to secondary school; moving within schools between nurture groups / learning support units etc. to the wider school; joining a new school due to family relocation; leaving school to join the workforce or to continue with education; becoming a teacher. The possibilities are wide and this list is not exhaustive. The changes may be physical, social, cultural or linguistic.

In spite of their seeming differences, transitions have some key commonalities. All involve an element of uncertainty for the individual(s) involved as they move to unfamiliar settings, and the process of transition, if successful, involves the development of a sense of belonging in the new setting. Hence many of the issues are emotional.

There are important questions for teachers about how these transitions are supported. The TePL project provides an opportunity to think about what we need to know in order to do this, and how the new technologies can be used to explore this.

### **b) Stage 2: Using technology to explore transitions**

In stage two, schools identified the areas of transition which they wished to investigate and we collectively discussed how we wished to use the technology to enhance our understanding of that process. By this stage it had become clear that, if the purpose of transition work was to enhance the pupil's experience by, for example becoming familiar with impending changes, finding out about new practices, expectation and routines and allaying fears, then pupils' perspectives are central to this understanding. Pupil voice became a central theme of this work.

Two secondary schools (Northfield and Millburn Academy) were interested in exploring the primary / secondary transition and two primaries (Danestone and Middleton Park) were interested in exploring the nursery/primary transition. It was decided that digital diaries of key moments recorded using tablets allowed the flexibility to capture images / thoughts when they occurred during the process. In the case of secondary school key pupils from different feeder primary schools were involved in the project of keeping a digital diary. In the primary schools the teachers took video footage at key moments and asked pupils and parents about their feelings and impressions as the process progressed.

The key period in the school year for transition work is May/ June, so much of this work is ongoing at the time of writing. Additionally, schools are keen to continue their explorations of transition as the children settle into their new settings in the next academic year, so there is further work to be undertaken after the summer break

### **c) Stage 3: Sharing and analysing findings**

To date one school (Danestone) has worked with the Development Officer to edit their video footage and share it with the other schools. This was successfully shared using the TePL technology at a recent meeting.

University staff will work with the participating schools to analyse their digital diaries before meeting to share findings and to identify differences and commonalities between settings.

3. **Outcomes** - lessons learnt, successful examples/next steps, messages to take forward

In terms of the use of technology we have learnt:

- Discussions between schools using TePL technology are fruitful ways of sharing ideas and professional perspectives
- Shared video footage through these media enhances the understanding and deepens discussions between schools
- Outcomes of the ongoing work to provide some indication of how TePL has helped our understanding of pupil experiences during transitions.

**Thematic report prepared by Jennifer Spratt**



# Creating Climates for Learning - CCL (Primary Schools): August 2015

Thematic Team Leader: Roseanne Fitzpatrick with school leads (Lindsay Ritchie, Jane Harrison, George Roberts and Jackie Lamont, Ruth MacKenzie (Aberdeenshire DO). Researchers: Gabrielle Ivinson and Rachel Shanks

## Background

CCL is an **umbrella theme** which encompasses more specific themes relevant to pedagogy; assessment; ethos; professional learning/enquiry.

**Schools:** Clerkhill Primary, Danestone Primary (main participants) with Dunnottar School, Millburn Academy and Turriff Academy (C3), University team and TePL Development Officer joined the primary schools for the Macro Event (see below).

**Three layers** were identified requiring different collaborative input: **Micro** (our classroom led by teachers and supported by university staff and DO); **Macro** – across classrooms involving schools-university sharing activities and working with other classes, student teachers and so on; **Professional Enquiry (PE) permeates all levels.** Fundamental to TePL and Expansive Education focus agreed by school leaders, school staff and the thematic team, led by teachers and university staff mentors with School Leaders.

## 1. Clerkhill Primary

The majority of the teachers committed to gathering digital evidence of their practice on active literacy and the value of modelling use of technology to capture practice; support for analysis/evaluation of practice based evidence; support for viewing of evidence and learning conversations around the evidence; future sharing with other practitioners. The majority of teachers agreed to film one active literacy lesson using iPads requiring an additional member of staff which led to some delays. A series of reflective questions were agreed which were identified to support the school-based leaders reflective processes with teachers who had filmed. Feedback indicated that other than 'nervous' at the start, most teachers were positive about filming and sharing with pupils. One teacher shared the lesson with her class to discuss the learning; as well as the usefulness of instructions. Pupil voice was actively encouraged. Another teacher shared the lessons with pupils who were keen to be interviewed and give feedback on what they did and why and how they learned. Another used the film to support pupil reflection on their learning. Pupil-teacher learning

conversations support assessment evidence of understanding and learning. All teachers were assured that the filmed lesson could be reviewed and deleted if they did not wish to share. The school had permission to film all but 2 pupils.

### Activities

- P5-7 – 5 classes filmed an active literacy lesson – most footage lasted approx 10 mins. SMT didn't complete filming due to time demands, change of HT and cover time provision.
- Questionnaire finalised and a peer support reflective discussion was filmed.
- Members of the SMT agreed to investigate opportunities for PSAs to support the filming.
- LR recommended time for staff to review use of TePL and carry out peer video footage analysis built into collegiate time. LR due to be based TePL classroom in 15-16 and more opportunities for engagement are likely.
- With permission from both the peer support and classroom teacher, it was recommended that the reflective conversations would be recorded digitally, transcribed and shared for comment and then perhaps embedded into LOCIT. It was agreed that this process be adopted unless the new version of LOCIT was available.
- LR agreed to coordinate planned student teacher engagement with TePL next session.

### Next steps

- Each member of staff who had filmed active literacy lessons would work with a member of the SMT to identify: strategies planned in the filmed lesson for successful learning in an aspect of literacy using active learning approaches; successful learning in literacy; segments in the filmed lesson when 'strategies/methodologies' were used; segments in the filmed lesson where successful learning is taking place and why – i.e. learning moments.

### Future activity planned

Create podcasts on various themes -> analysis of practice/impact using LOCIT -> sharing with others.

## 2. Danestone Primary

CCL activity at Danestone focused on all teachers undertaking a **professional enquiry/action research project** – this focus has acted as the main driver for CCL theme engagement. A number of the projects have had a CCL theme. It had been planned that some teachers would consider the use of the TePL tools/equipment to support evidencing practice and to review impact of their professional enquiry focus themes on an aspect of classroom-based practice. However in practice this was not possible as the TePL space is in a separate classroom and participating teachers felt that to move their class to a different

classroom environment would impact on the outcome of their research. Others forms of technology were used as appropriate to digitally record aspects of their practice for review purposes.

All Danestone staff had access to a university tutor to act as a mentor/critical friend. They were invited to take part in a series of webinars led by Bill Lucas (Expansive Education) on the process of professional enquiry. Webinars were recorded for teacher access them in their own time. The value of using technologies to gather digital evidence of practice to support this evaluative and reflective cycle was promoted through the professional learning support provided by both university staff and the webinars. Teachers will have completed and written their projects by Autumn 2015. 2 NQTs already completed their reports: NQT1 – investigated the impact/effect of the use of collaborative learning theory on children's engagement levels in literacy lessons; NQT2 – investigated the impact of focusing on the importance of listening skills as a means of improving engagement level and pupil voice.

Not all the teachers included technology in their studies. Here are three examples:

**Teacher 1** investigated impact of listening to music in supporting creative writing and pupil engagement (personal choice of music by pupils). Evidence – pupils writing creatively but independently while listening to music. Focus for digital evidence analysis will be an observational checklist. The teacher investigated digital evidence involving use of iPads, to video her teaching a lesson. She reviewed lessons with the children – she discussed when they learned; what they learned; when they got fed up; which parts they most enjoyed. This teacher will use her experiences i.e. the benefits and challenges of using digital technology for learning. The school also plans to organise a school sharing of events with peers next term.

**Teacher 2** investigated the impact of the use of specific activities aimed at improving resilience in youngsters (P3-4). Evidence – teacher interviewed pupils to discuss their resilience. Teacher 2 invited to discuss video evidence with university mentor, school-based peer and share with wider school staff.

**Teacher 3** investigated the impact on pupil engagement and motivation when using maths creative activities. Evidence – Teacher collected video evidence of the P2 children engaging in learning activities' The level of engagement of the children will provide an analytical tool of the video evidence (Leuven engagement scale). Findings will be discussed with university mentor or school-based peer prior to whole school sharing event.

### **Possible future activities**

#### **(a) Probationers**

Opportunities were discussed with SMT to encourage the NQTs to film their classroom practice in the mandarin classroom as part of one of their formal observations. They will be encouraged to engage in

reflection on digital footage i.e. probationer self-reflection; probationer peer reflection; reflection with mentor and where possible with the children. Initial conversations were met positively.

#### (b) Student Teachers

Student teachers in the school will be encouraged to use TePL or equivalent equipment for the above purposes. Again, the plan is to promote this with student teachers in 15-16.

### **Whole school next steps**

1. The plan is to continue to undertake a small scale PE project as part of the annual review of professional learning. The school SMT indicated that engagement in the PE projects involving mentoring and webinar support, had provided a significant learning experience for staff who were seeing the benefits of action research. Studies that included a wider use of technologies in particular to support self-evaluation of practice and where children were also involved in discussion and reflection of learning were particularly powerful.
2. Chinese links – as this school is partnered with a school in China an idea long term would be linking with the partner school using the TePL technologies.
3. To develop a bank of video training evidence to support wider PL of other teachers in school and across own and partner LAs
4. To encourage use of TePL equipment for probationers and student teachers as indicated above.
5. Analysis of practice using LOCIT.
6. Organisation of a school sharing event.

### **3. Dunnottar Primary**

Focus: Tutor observation of student teacher practice using TePL equipment to view and record lesson remotely with follow up student teacher in-depth self-analysis followed by a joint tutor/student teacher professional learning conversation. A volunteer student teacher was observed (teaching in the school's TePL classroom) by her tutor (in the School of Education space) in real time. Recording the lesson provided rich opportunities for deeper self-evaluation. In addition, the student teacher and tutor jointly completed a collaborative conversation log to identify strengths; areas for development and next steps with reference to the professional standards. The learning conversation considered the experience of remote lesson observation and post lesson individual and joint review with reference to the digital evidence of practice with reference to GTCS Professional Standards. The experience worked really well for both the student teacher and

the tutor. Approval for the lesson to be recorded had been sought from parents. Children participated naturally in the lesson after the initial introduction to the tutor observing from a distance and the end of lesson feedback, questions and thanks from the tutor to the children in the class.

Student teachers were encouraged to seek opportunities to engage with TePL during their placement. Some students were very keen to arrange school-to-school links but two main barriers were identified (which can be resolved in the future): linking school to school was challenging due to timetabling issues; student teachers were not based in TePL classrooms. However, the TePL schools were very keen to encourage such use with future students on placement in their schools

## **Macro Event**

### **Whole Team Event linking TePL across 5 venues (University, 2 Primary, 2 Secondary schools)**

Focus for this event was to share and discuss techniques to support effective and meaningful evaluation of digital recordings of classroom practice captured through TePL or other technological equipment such as iPads. In addition, focus groups provided feedback on TePL engagement to support future sustainability

- Location of TePL equipment – a mobile unit would be useful to pilot to test out greater flexibility and encourage greater use by a wider variety of staff if the equipment could be used in their own classroom.
- More discussion needed on static versus mobile units in terms of potential yet whilst maintaining the fundamental elements of connectivity and capacity for shared learning.
- Expanding use within schools and enabling other schools to participate.
- LOCIT not being available pre-summer to support teacher reflection of video evidence – this is now available and will be launched at Celebration event in September.
- Planned timescales will have to become very more flexible to suit the day to day business in schools and also the challenges of cover availability to allow teachers and members of SMT to undertake the TePL activities in the work plan.
- Advantages of the TePL ethos enables and supports: whole school approach to engagement in a professional enquiry action research project enabling specific foci to be developed according to need e.g. NQT participation through projects
- Growing confidence in teachers to film lessons (trustworthiness of ethos) and use the lesson capture to support reflection on learning with children

Potential uses of TePL throughout teaching practice remote viewing observation, feedback, discussion and reflection.

## Core TePL Pioneer Schools



**Bunsgoil Ghaidhlig Inbhir Nis**



**Clerkhill Primary School**



**Danestone Primary School**



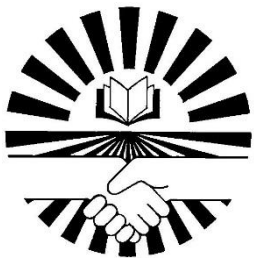
**Dunnottar Primary School**



Lochyside RC Primary School



Millburn Academy



Turriff Academy