

Use of Learning Platforms to support Continuing Professional Development in HEIs and Schools

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1. Executive Summary

This report focuses on the following question:

What practice can be identified in HEIs and in schools about how learning platforms are being used to support ITT tutors and serving teachers as part of their CPD to use the LP, and use of the LP to support CPD in general?

The use of learning platforms (LPs) in schools and HEIs is currently focused on supporting the teaching and learning processes between HEI tutors and students and between teachers and pupils rather than the continuing professional development of the tutors and teachers themselves except through online programmes.

Evidence for the report is derived from case studies gathered from 12 institutions: six HEIs (ITTE HEI member institutions) and six schools (one infant, two middle and three secondary) using an agreed framework and interview schedule. (Annexes 2 to 5 provide more details about the methods.)

There are many examples in the case studies showing how the LP supports **structured and unstructured independent study and collaborative learning** for HEI students and school pupils. Practice in institutions is clearly building year on year, with the pedagogical use of LPs being particularly supported by informal and ongoing peer support and through knowledge sharing through professional networks.

The role of the LP as an **information repository** is well established, as is its support for **administration and communication** between staff, pupils, and partners in other institutions, where access rights are permitted. **Assessment practice and learning support** using the LP is developing with different departments in the various institutions being at different stages.

With respect to barriers, interoperability problems between well known management information systems and the LPs were reported as hindering development of practice. With respect to access rights, a key finding concerned limited access rights to HEI LPs by school mentors and to school LPs by HEI tutors, which is an issue surrounding the successful outworking of LPs.

There are major differences in levels of LP use between schools and HEIs, with practice more embedded in HEIs possibly because staff have access to dedicated staff offering formal and informal just-in-time support and training which supports the rapid building of a critical mass of staff users. Schools are at a much earlier stage of development and do not usually have access to these dedicated training and support units. The LP training resources that Local Authorities (LAs) in the sample offer to schools is not equal to that offered within universities.

In the examples that were reported in the school case studies where the LP was used for CPD, it tended to be for online skills-based development such as in the use of the LP.

Because of the lack of use of LPs for CPD and to understand the affordances and barriers to the use of the LP for CPD, we analysed the forms of CPD that teachers and HEI tutors traditionally experience (See Table 6.1). We drew on additional data from teachers as reported in the Becta-commissioned report by Leask and Preston (2009). Teachers and HEI tutors who are subject specialists in their areas normally have few people in their institutions who are similarly expert, so the CPD they described as most helpful for developing knowledge and understanding requires interactions with peers, experts, research and evidence available beyond the institution. Teachers expressed their frustration at being unable to access appropriate CPD in general (see Leask and Younie (2009) report to the Select Committee Inquiry) and CPD in the use of LPs; ICT CPD provision is currently devolved and dispersed.

Respondents raised issues of lack of connectivity between HEI, school and national professional association LPs and restrictions on access as inhibiting the use of LPs for CPD. The problem is this: given the plethora of school and HEI learning platforms and the fact that HEIs work with schools in different regions and LAs, if CPD materials are developed for one context, how can these be shared? This lack of interconnectivity means that many opportunities for knowledge sharing and informal CPD areas are lost. Interconnection between the LPs would enhance professional practice and allow CPD materials to be shared across all learning platforms. The NCSL LP for example, provides a 'central knowledge hub' or national LP for those interested in leadership and management.

The concept of a 'central knowledge hub' is that of the authors following their analysis of this data and other research (Becta, 2009, 'ICT Tools for Future Teachers' research), where teachers reported wanting online opportunities for professional development (CPD), peer challenge opportunities as well as RSS feeds from key sites such as professional/subject associations to the school LP.

The researchers looked at the forms of CPD used and proposed in the data and have used the term 'central knowledge hub' to explain the type of resource respondents were suggesting would be helpful (see table 6.1 for further details). This analysis was further supported by the Becta (2009) 'ICT Tools for Future Teachers' research, which found that innovative teachers and teachers reluctant to use ICT in their teaching wanted to use online networks for their CPD. Currently there is no national interconnected network for teachers or HEI tutors to join up with fellow practitioners for informal CPD networks and knowledge sharing. For example, how could one develop the opportunities learning platforms afford to support CPD for music teachers across the country? How will subject associations with their resources for specialist CPD integrate with the variety of LPs to support subject-specific CPD?

Major findings are that teachers want and need CPD in relation to their knowledge, skills and understanding of LP uses both technically and pedagogically, but this support and training is patchy and not always available at the time of need in contrast to HEIs.

2. Context and background

This report focuses on the following question:

What practice can be identified in HEIs and in schools about how learning platforms are being used to support ITT tutors and serving teachers as part of their CPD to use the LP, and use of the LP to support CPD in general?

The report complements other work which Becta has commissioned. This includes a survey in the use of learning platforms (LP) by Higher Educational Institutions (HEIs), and a literature review of LPs use in schools and HEIs. Annex 1 provides background to the use of learning platforms in England in February 2009.

This report provides an overview of case studies undertaken in HEIs and schools (and included as annexes) which report on:

- the use of LPs to support professional development in general; and,
- the training and professional development provision needed to support HE tutors and teachers in their use of such systems.

The work was undertaken in liaison with the members of the ITTE community involved in the complementary studies, both through the sharing of case study contacts, emerging findings and ensuring that any overlap was kept to a minimum. The characteristics of the HEIs and schools included in the study, the systems they use and how the choice was made to adopt the LP are set out in Table 2.1. All the systems listed had gone through various iterations and practice is continually evolving.

Table 2.1 Characteristics of HEIs and schools, their systems and how the choice of LP was made

Case study no.	ITT/CPD Courses using LP	Dedicated training support	Systems used	How was the choice made?
A: HEI Wales	Prim. UG, Prim. PG, Sec. PG, FE PG, MA	Yes	Blackboard and PebblePad	University Partnership
B: HEI East of England	Prim. UG, Prim. PG, Sec. PG, MA Student associates (pre-ITT)	Yes	Blackboard/Web CT	University central services
C: HEI West Midlands	Prim. UG, Prim. PG, Sec. PG GTP, HLTA	Yes	Bespoke	University central services

D: HEI Yorkshire and Humberside	SCITT, Prim. UG, Sec. PG, MA, Foundation degree, HLTA	Yes	Moodle	Head of school of ed.
E: HEI London	Prim. PG, Sec UG, Sec. PG, MA, EdD, PhD	Yes	Blackboard/Web CT	University central services
F: HEI East Midlands	Prim. UG, Prim. PG Sec. PG, MA, GTP	Yes	Desire2Learn Also Moodle made available for trainee teachers	University central services with full staff consultation
G: School 1 East Sussex	Secondary Age 11–16 years KS3, KS4	No	Learning Platform A, B and C	Local Authority decided to use Learning Platform C
H: School 2 Rutland	Secondary Age 11–16 years KS3, KS4	No	Learning Platform D	School decision
I: School 3 Leicestershire	Secondary Age 11–19 years KS3, KS4, KS5	Yes – as a training school	Learning Platform D	ICT industry partner school and Cisco academy LA uses Learning Platform B
J: School 4 Bedfordshire	Primary/middle Age 8–13 years KS2, KS3	No – except once a week a trainer is available	Learning Platform E	Local Authority recommended
K: School 5 Hertfordshire	Primary/middle Age 8–13 years KS2, KS3	No	Learning Platform E	Local Authority recommended
L: School 6 East Sussex	Primary/middle Age 3–8 years Foundation Stage Early Years, KS1	No	Learning Platform C	Local Authority recommended: the headteacher was part of the LA consultation.

Commentary: key differences between HEIs and Schools

University Schools of Education have dedicated trainers and training in the use of LP systems that is available all the time as staff need support; this is provided through the central university CPD provision. With respect to the case study schools, it is the

LAs that provide training for the LPs, which may be supplemented with training from the commercial LP provider and in-house training provided by the school's ICT specialists.

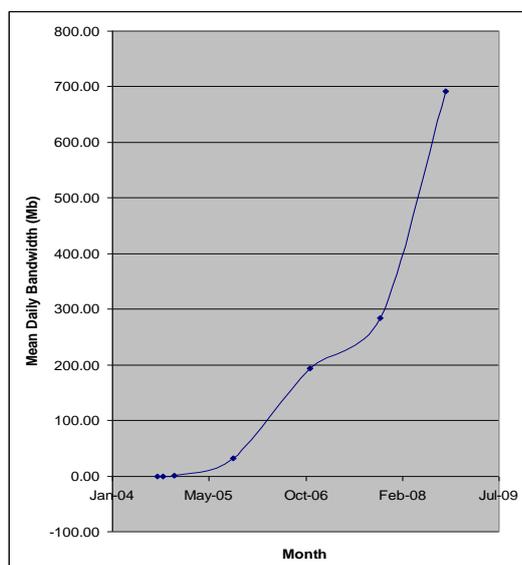
Many universities are using Blackboard (ITTE HEI/ITE survey, 2009; JISC, 2004), which means skills are transferable as staff move between institutions. The extent to which LP skills are transferable between schools is not clear.

With respect to the nature and rate of development of the LP, it is too early in the case study schools to identify a pattern; however, the HEIs identified an evolutionary approach to the development of the LP, which was one that showed increased use year on year, as illustrated by the HEI case study from Yorkshire and Humberside. Table 2.2 set outs the increased usage statistics and Table 2.3 shows the increase in mean daily bandwidth being used.

Table 2.2 Increased usage statistics from 2004 to 2008 (HEI Case Study D)

Month	Months from start	Visitors	Visits	Pages	Hits	Bandwidth (Mb)	
						Monthly	Mean Daily
Sep-04	0	7	35	78	78	0.02	0.00
Oct-04	1	11	50	122	122	0.02	0.00
Dec-04	3	32	47	862	2206	29.74	1.28
Oct-05	13	422	1243	62222	150817	999.96	32.26
Nov-06	26	1205	4068	128059	351555	5826.56	194.08
Nov-07	38	2075	6260	182714	500036	8509.44	283.80
Oct-08	49	1177	2980	210357	874282	11765.76	692.21

Table 2.3 Increase in mean daily bandwidth being used from 2004 to 2008 (HEI Case Study D)



3. Methods

Case studies were gathered from 12 institutions: six HEIs (ITTE HEI member institutions) and six schools (one infant, two middle and three secondary) using an agreed framework and interview schedule. Annexes 2 to 5 provide more details about the methods.

4. Usage of the learning platform and examples of good practice

The six HEI case studies include detailed examples of how LPs are used for a range of purposes. These are summarised in Table 4.1. Further detail is provided in the case study material in the annexes.

Table 4.1 Types of LP uses as reported by HEIs, with examples of activities

Types of LP use	Examples of activities and functionality
ADMINISTRATION	Usage / access statistics
	Trainee records / Tracking
	Timetabling
COMMUNICATION and INFORMATION GIVING	Between staff (including mentors in partner schools – where access rights to HEI LP are permitted to school mentors); between staff and trainees and higher degree students e.g. pre-readings
	Announcements /news
	Blogs for trainee teachers' reflection; by tutors for support on school placements and by former trainees to provide advice to current trainees.
	Calendar
	Podcasts to provide group feedback
INFORMATION REPOSITORY	Storage of course materials and resources including web links, multi-media, video clips, quizzes
COLLABORATIVE WORKING	Communal construction of knowledge e.g. through evaluation of resources; facilitating discursive activity; sharing of lesson plans
	Wikis – for group reports; on placements for sharing experiences, resources and advice; to support trainee ICT projects and exchange visits with US students.
	Virtual classroom – for tutor-led sessions whilst trainees are on school placements
	Forums – for summaries of sessions and group responses to issues; by tutors to raise issues with trainees

LEARNING and ASSESSMENT	E-portfolios – uploading of trainees’ work
	Plagiarism detection (e.g. Turnitin)
	Self assessment coupled with development of subject knowledge, e.g. trainees work their way through subject knowledge audits and use links and resources to cover gaps in subject knowledge
	Tutorials – interactive Flash-based tutorials
	Formative assessment and feedback – students upload files which are peer-reviewed using a forum e.g. lesson plans and resources, interactive worksheets, reviews of a book or software or website, group presentations, electronic feedback on assignments and reflective journals.

Table 4.2 summarises the types of use and examples reported by the six case study schools.

Table 4.2 Types of LP uses as reported by schools, with examples of activities

Types of LP use	Examples of activities and functionality
ADMINISTRATION	Usage / access statistics
	Pupil records / tracking
	Timetabling
	Problem with interoperability of SIMS and MIS systems – they don’t pick pupil assessment data from the LP or publish to the LP
COMMUNICATION and INFORMATION GIVING	Connections between family of schools
	Department areas: forums
	Noticeboards and display boards with links to information and documents such as uniform lists, order forms, clubs and announcements /news
	Blogging
INFORMATION REPOSITORY	Calendar
	Key Stage / Departmental areas: storage of curriculum materials / resources; links to websites
COLLABORATIVE WORKING – project work	Podcasting – linked with pupil assessment tasks
	Video conferencing
	Use of online games
	Designing resources for sharing

INDEPENDENT WORKING	For example, in MFL, pupils listening to recordings and recording and comparing their own work
	Student folders and teacher folders are available externally
LEARNING and ASSESSMENT	Testing subject knowledge of pupils
	Online testing and tracking of own results by pupils
	E-portfolios using Dream Weaver
	Homework and class work uploaded into the teacher's folder by pupils for marking

Comparisons between schools and HEIs

Given that higher education has been using LPs longer and their use is more established than has been the case in schools (Becta, 2003, p.12) and, because a different range of systems are in use in schools compared to HEIs, there are contrasting developments. HEIs were more established in the use of LPs, making more advanced use of the interactive and collaborative features of the LPs, with the exception of those schools identified as 'leading edge' whose practice was equal to the advanced uses in HEIs.

5. Training/CPD/Staff development for using learning platforms

This section reports on the forms of CPD for HEI tutors and school staff. Table 5.1 lists forms of CPD provided to HEI tutors and Table 5.2 lists forms of CPD provided for school staff.

5.1 Forms of CPD provided to HEI tutors

All the university case studies highlighted the availability of training within the organisation, with training being provided in many forms. Table 5.1 sets out the characteristics of three different forms of training in the use of the LP which are available within universities: central university provision, departmental provision and peer support.

Table 5.1: Forms of CPD provided to HEI tutors on the use of LPs

Type of provision	Characteristics of each type of provision
Central university provision -Formal training and support	Training for all staff -Courses providing structured training -Series of workshops at introductory and intermediate level -Drawing on internal and external expertise -Training put online allowing for follow-up work E-champions model

	<p>FAQs online IT support via phone, email and forums</p>
<p>Departmental training -Formal and informal training</p>	<ul style="list-style-type: none"> -Technical liaison and support officers providing demonstrations, advice and individual support -Bespoke training for groups delivered on request; also tailored training for individual requests -Evolutionary approach: starting small and building expertise and practice -Trainee teachers who train HE tutors and other trainees
<p>Peer support as a form of training</p>	<ul style="list-style-type: none"> -Peer support – formal and informal -On-demand training – ‘just in time’ -Off-site users – can access peer support -Mix of online and face-to-face training -Individuals – self-taught

5.2 Forms of CPD provided to school teaching staff

A particular key factor in the effective use of the learning platform with respect to teacher use in schools is the level of expectation from the senior leadership team (including middle managers such as heads of department or directors of key stages) that CPD will be taken in order to use the LP. Where the head of department or key stage manager sets a standard of use through their own practice, others are likely to follow. This stresses the importance of leadership with respect to driving the LP initiative in schools, which is at an earlier stage than HEIs.

Across the case studies of schools an evolutionary approach to LP use was identified; this can be characterised as keen staff/early adopters using the LP first, which other staff see the benefits of and then appropriate for themselves, so use of the LP evolves gradually, once proof of concept has been demonstrated; also users coming behind modify existing resources and uses of the LP.

In more advanced schools there were teachers developing the use of the LP, which over time has created collaboration and ownership of the resources in the department. Secondary schools were more advanced than primaries, with the exception of the leading-edge primaries.

All the school case studies identified training that was available to teachers. Table 5.2 sets out different forms of training in the use of the LP which are available within schools.

Table 5.2: Types of LP CPD provision: characteristics and activities provided to school teaching staff

Type of provision	Characteristics of each type of provision
Central school provision -formal training and support	-Whole-school training days -After-school training sessions e.g. during whole staff meeting times -Drawing on external and internal support e.g. from LP provider, LA advisors, school ICT experts -Pupils training the teachers e.g. Year 10
Key stage (KS) / departmental school provision	-Drawing on internal expertise e.g. heads of dept/KS as 'lead learners' modelling use; ICT advanced skills teachers -Technical personal providing departmental/individual advice and support -Evolutionary approach: starting small and building expertise and practice – e-champions model
Peer support as a form of training	-Peer support – formal and informal -On-demand training – 'just in time' -Bespoke – for individuals and groups -Individuals – self-taught

5.3 Affordances and barriers to staff CPD *on* learning platforms

There are many similarities between the CPD opportunities available to university staff and school staff through for example central school provision, departmental provision and peer support. However, there are also some major differences:

- HEIs have dedicated training units to deliver the training and support all the time.
- School staff have much less flexibility in the use of their time than HEI staff, who tend to have more flexible timetables and can therefore more easily attend the training and support opportunities available.
- Because there is an expectation that university students will be independent learners, there is a natural role for the LP to support tutor/student communication and access to course materials, as there is reduced contact time compared to schools. In addition, many university students will be remote and part-time learners so there is a natural role for the LP in supporting HEI teaching and learning.

The range of opportunities for staff development in the university and the flexibility staff have to deploy their time mean that any barriers to accessing training and just-in-time support in the use of the LP within the university were due to individuals not prioritising this form of training.

A particular key factor in the effective use of the HEI learning platform in a teacher training programme is the level of expectation in the department. Where the head of department sets a standard of use through their own practice, others are likely to follow, and where use is reported to Ofsted via the self-evaluation document, a clear message about expectations is sent to staff. University student demand also emerged as a key factor that put pressure on HE tutors to use the LP. There is a parallel here with ICT and CPD leadership in a school too, where a head of department often sets the benchmark for LP use, by modelling effective practice with the LP and providing just-in-time training within the department.

Across the case studies in schools and HEIs there was an evolutionary approach, developing the use of the LP with a critical mass of staff over a period of time; as more teachers used the LP, so more teachers considered that they ought to be using the LP, which can be characterised as moving from the innovators/early adopters to the early majority and then the late majority in Rogers's model of diffusion (1983). This was reported as an effective way of developing collaboration and ownership of the resources and ensuring that practice has become embedded over time.

For schools the most effective way of developing the LP was: plenty of formal structured training, particularly where the LA provided training *together with* training from the LP commercial provider, which was *followed up* by informal peer training and support, with opportunities for teachers to practise their skills with the drive to embed LP use from the school leadership.

Where a serving teacher has one day a week directed time (funded by the LA) to support and encourage the use of the LP with other teachers (within the school and across local schools), in order to provide semi-formal and informal peer training, this is reported as particularly effective; another LA provides one full-time consultant to do this role, which is reported as helpful, though more limited due to the fact there is only one person providing this role. Reasons as to why this former type of CPD is effective are due to teachers' preferred learning being from another teacher and the peer nature of the training, which provides scaffolded/situated learning in the teachers' setting that meets their specific needs. The ITTE HEI/ITE survey also reports the effectiveness of this model of CPD with HE tutors, where figures for types of CPD show quite clearly that informal peer support is a very important element of LP development (see table 3.1 in the survey report).

Where LAs provide dedicated LP training and support, either through consultants or serving teachers, this targeted provision was effective in enabling teachers to develop their skills for using the LP and led directly to teachers' increased use of the LP in schools.

6. Training/CPD/Staff development *via* learning platforms

6.1 To what extent does the learning platform support professional development of staff?

There were few examples in either HEIs or schools of the LP being used for CPD. Some online courses were reported – more in HEIs than in schools.

“For staff development – this is an area that has, up to now, been little used.” HEI case study C: West Midlands.

But what possibilities are being missed? See Table 6.1 for a consideration of the role the LP could play in supporting CPD in general.

6.2 Affordances and barriers to staff CPD development *via* learning platforms

Having conducted research on the forms of CPD available to teachers and tutors, a table has been created to outline each of these; from this it is possible to see where the LP may play a role. In doing this analysis we realised there is a role for a central knowledge hub; this analysis was supported by other research (Becta, 2009 ‘ICT Tools for Future Teachers’) where teachers reported wanting a centralised professional network where they could locate information, including evidence-based practice, and access peers in other schools. Some subject associations are doing this, but for the most part, teachers reported they found it difficult to find online networks supporting knowledge sharing in their specialist areas.

CPD takes two main forms – ***formal course or meeting driven CPD*** and ***informal connections*** with experts, teams and individuals within and outside the institution. Where an institution requires changes in practice such as in the use of learning platforms, then CPD about the change needs to be linked with a change strategy, which includes links with appraisal systems. We have identified the patchy nature of CPD provision for teachers in the use of LPs in the case study schools, and CPD in general, as reported in Leask and Younie (2009). The implication is that should we want to address whole-system change, this would require CPD (for example, in the use of LPs/ICT), being tied into performance management. As yet there may be little understanding about the role of the LP in raising standards through, for example, anywhere anytime access to learning materials allowing learners to consolidate their learning and review their progress, and to allow teachers, parents and carers access to up-to-date monitoring and assessment information, and supporting personalised learning.

Having conducted research on the forms of CPD available to teachers and tutors, a table has been created to outline each of these: from this it is possible to see where the LP may play a role. In doing this analysis we realised there is a role for a central knowledge hub; this analysis was supported by other research (Becta, 2009 ‘ICT Tools for Future Teachers’) where teachers reported wanting a centralised professional network where they could locate information, including evidenced based

practice, and access peers, but in a way that was more centralised and systematic than the current networks to which they belong.

Table 6.1: Forms of CPD for teachers and HEI tutors, the role of the learning platform and the role of a central knowledge hub

1	2	3	4	5	6	7
Form of CPD	Tutors	Teachers	Formal or informal provision	Who provides this	Potential LP role in CPD support/provision	Role requiring central co-ordination ¹
1. 1:1 mentoring and peer review from more experienced staff in particular specialist areas from inside and outside the organisation providing peer challenge and intergenerational knowledge transfer	√	√	Formal and informal	- The employing institution - Colleagues in professional networks or in joint projects	Wiki spaces to write collaboratively and comment on documents	Provision of 'people finder' functionality.
2. Through team working within and without the organisation – cross-generational and with members with different levels of expertise. Super-complexity of issues and society requires this.	√	√	Informal	- The institution through teaching and research teams - The wider profession through professional organisations and joint research projects	As repository and providing Web 2.0 communication tools for team working	Provision of 'network finder' functionality as repository and providing Web 2.0 communication tools for team working ²
3. easy access to the research literature and the research evidence	√	√	informal	National agencies Research organisations Publishers HEIs	Links to selected existing national portals providing this access	Improvement in functionality of national portals Guidance about forms of presentation of research ³ Support for cross-search functionality for the Education Evidence Portal

¹ Contact the authors for information about this concept and for examples from other public sector providers.

² The research team has examples of where this approach is applied in other professions.

³ Considerable guidance was produced by the DCSF NERF Policy and Practice network – details provided on request.

<p>4. Training courses – internal e.g. policies, new software and approaches</p>	√	√	Formal	Internal providers and external providers contracted to the institution	Ongoing support through internal expert Q&A	No role
<p>5. Training courses – external e.g. new teaching, assessment and research methods</p>	√	√	Formal	External providers e.g. Social Research Association	LP could pick up RSS feeds from providers	Central knowledge hub could pick up RSS feeds and merge these. The Communities and Local Government department have interesting practice here.
<p>6. Access to specific resources</p>	√	√	Informal	Teaching team leader Research group leader	Repository to specific teaching resources, guidance, research opportunities and examples	Central knowledge hub could provide newsletter highlighting new resources and pick up RSS feeds and merge these.
<p>7. Personal investigation – exploring new possibilities and doing a risk assessment of that change</p>	√	√	Formal or informal	External provider or personally driven	Repository for findings for other team members	Links to Resource review lists
<p>8. Engagement in professional networks including being engaged in reflective practice in professional networks and the open flow of ideas at local authority workshops/professional conferences. LA subject specialist staff provide mentoring, intergenerational knowledge transfer and wider view.</p>	√	√	Formal (e.g. conferences) and informal (e.g. knowledge sharing and peer challenge)	Professional associations e.g. subject associations Project-based networks Government agencies	Could provide links to information from subject associations e.g. events, publications, research projects, conferences	Could provide central listing with RSS feeds to LPs in institutions; events calendar, virtual notice board

9. Engagement in R&D projects – within the organisation	Some	Some	Formal or informal	Teaching team leader Research group leader	Staff newsletters including invitations to staff to become involved	Partner-finding service for others addressing similar problems
10. Engagement in R&D projects – with staff in other organisations	√	Some	Formal or informal	Various funding agencies	Staff newsletters including invitations to staff to become involved and requests from potential partners	Partner-finding service

Learning platforms are particularly appropriate for some forms of activity related to teaching and learning and not relevant to others.

Clearly the LP can have a general CPD role, providing information about whole-school initiatives and information management about progress on school priorities. Subject-specific CPD, which is critical to improving pupil achievement, is not likely to be provided through the school or the LP unless the LP is linked to expert professional networks and resources that support the construction, implementation and evaluation of new pedagogic knowledge. Table 6.2 lists major barriers together with suggested solutions which indicate potential affordances of LPs.

Table 6.2 Barriers in use of LPs in CPD for HEI tutors and teachers and solutions to indicate potential affordances

Barriers	Solutions & Observations
Multiple platforms: school and HEI LPs are different – requiring different log-ins Barrier to sustained use by trainee teachers: drop-off occurs when trainees are in schools – schools have different LPs Implication – until LPs have similar functionality and skills in using them are easily transferable, then teachers, HEI tutors and trainees need training on the specific LPs; because HEI tutors and trainees work across local authorities, in different schools on placements, their needs are complex. Teachers in the same school may undertake CPD with different HEIs and again may need training.	More intuitive hardware and software – this will come with system maturity. Interoperability between LPs
Institutional restrictions: firewalls; security; administrative restrictions e.g. no year-round availability, lack of e-portfolio software, and registering for off-site use is not possible, for example by school mentor	Access within and outside the institution/school. (Schools may be better in this regard as they move to communicating via the LP in real time with parents and carers.)
HEI LPs don't necessarily fit the needs for students on placements	LPs designed to be flexible to fit the needs of students on placements and their mentors.

HEI tutors' experience in how to use the LP varies, because they are not taking up training. For some staff (including part-time staff), using the LP is not a natural part of their work and they see using this as a barrier; some not convinced of the value of LP use. When part-time staff do not use the LP, they are not familiar with it, which hinders use.	Making training and use part of a change management strategy including making effective use mandatory and reported through the appraisal process and evaluated through the Ofsted process.
Limitations of software e.g .saving of draft responses in online forums is not possible; they do not accommodate all learning styles, mainly text based	Software development to support widespread use through making the functionality intuitive and accessible: uploading, updating and amending learning materials needs to be an easy process.
Lack of structured opportunities to reflect on practice and develop pedagogical practice with peers	Investment in CPD.
Other forms of communication are more immediate and meet communication needs more effectively – email, MSN, Facebook and Google docs	The use of the LP should be appropriately targeted.
Widespread access to the LP beyond the ITE students, for school mentors incurs additional costs or is not possible, because you need to be a registered HEI student to get access to the HEI LP	Additional staffing is required to train school mentors in the HEI LP
Need for a common platform or ones that have intuitive use	Transferable skills across platforms
Individual LPs not interconnecting	Partnership approach and use of same LP

7. Additional specific issues arising from the data

School and HEI LPs are different – until LPs have similar functionality and skills in using them are easily transferable, then teachers, HEI tutors and trainees will need training on the specific LPs used in their own institution. Because HEI tutors and trainees work across local authorities, in different schools on placements, then needs are complex.

HEI and school LPs require software development to ensure that functionality is intuitive and accessible, for example, uploading, updating and amending learning materials; this is essential if more speedy implementation and embedded use are to be achieved.

A key finding concerned limited access rights to HEI LPs by school mentors and to school LPs by HEI tutors. Access rights need to be broadened across and between the sectors to facilitate greater use; this is particularly the case for supporting trainee teachers on school placements, which provides first-hand experience of the different sectors (HEIs and schools) using different LPs.

Creating staff generated materials for the LP is a very time consuming and a costly enterprise. The materials generally require a higher level of preparation and presentation (in spite of templates) than that required for teaching materials that individuals have created for their teaching and their departments in the past. Teachers may also have used materials that had copyright or IPR issues that could be difficult and/or expensive to solve. There are some contractual issues about expectations for the production of LP materials and ownership of these materials for teachers and schools.

The involvement of LAs in school LP implementation and CPD varies, from recommending a platform and letting the schools organise their own training, to LAs who provide CPD training and a network through which schools can collaborate. Some LAs have made provision for the availability of LP specialists (by purchasing the use of serving teachers one day a week or employing a specialist within the LA whose remit is to support schools). There is evidence that where the LA provides CPD and extra support, the LP is implemented and embedded more quickly; however, LA provision was varied as judged by the schools.

A major finding is that teachers want and need CPD in relation to their knowledge, skills and understanding of LP uses both technically and pedagogically, but this support and training is patchy and not always available at the time of need. CPD for experienced teachers and tutors requires connections with their subject-specific peers through professional networks. LPs clearly have a role to play here, because they can provide the space and functionality to meet professional needs at a national level by providing information, such as evidence-based practice and access to peers for informal learning, which was found to be an effective form of CPD.

We conclude that there could be a role for a professionally managed central knowledge hub – a ‘super’ LP – supporting knowledge sharing and development and peer challenge opportunities, which are essential to effective CPD. At the moment, teachers’ CPD with respect to the use of the LP and the use of the LP to support CPD is patchy. In general, there is a strong demand for CPD from teachers in how to use an LP, and such provision needs to be appropriate, fit for purpose and flexible to meet a range of needs. These include formal and informal training in the technical features of the LP, such as setting up curriculum areas/course sites on the LP, adding and creating content, to the more advanced and interactive features that can enhance teaching and learning, so that pedagogical implementation of LPs can be further realised.

Web 2.0 technology in particular provides opportunities which have not yet been realised and would indicate that further research is needed in understanding how these relate to LPs.

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Annex 1: Background to the work – taken from the Becta proposal

Since 2000 there has been a steady increase in the use of learning platforms (LPs) in Higher Education. JISC have defined the nature of LPs, including their content and structure. The literature describes their development and use to support a range of university courses. What is less clear is the extent and nature of their use in initial teacher education.

In schools developments have taken a somewhat different path and a different range of systems have developed in the two sectors.

Becta currently defines a learning platform as ‘bringing together hardware, software and supporting services to enable more effective ways of working within and outside the classroom.’ (See also <http://www.nextgenerationlearning.org.uk/At-School/extending-learning/> and Becta 2008)

Learning platforms can vary considerably, but each should provide a range of ICT-based functions including:

- **Content management** – enabling teaching staff to create, store and repurpose resources and coursework which can be accessed online
- **Curriculum mapping and planning** – providing tools and storage to support assessment for learning, personalisation, lesson planning etc.
- **Learner engagement and administration** – enabling access to pupil information, attendance, timetabling, e-portfolios and management information
- **Tools and services** – providing communication tools such as email, messaging, discussion forums and blogs.

This definition has to some extent grown out of the nature of the systems and practice among leading-edge schools and a Becta programme to establish a framework of learning platform providers, supplying systems and services which meet a set of functional and technical specifications. The aim of such activities has been to establish a set of procurement criteria that schools should consider, and to identify suppliers of systems who met the specifications, to assist schools and LAs in their procurement activities. Such framework agreements run for three years. A range of systems exist that are not currently on the framework either because they have been released since the framework was drawn up, or because their products could not at the time show 100% match with every element of the framework, although they may well now do so.

The pattern of LP use and take-up in schools is at an early stage. *The Harnessing Technology Review 2008* concluded that:

- While the use of learning platforms, and their integration with management information systems, had increased during the last year, practice was still at an early stage of development in schools. Most schools’ infrastructure does not support mobile and remote access to the learning platform.

- Teachers claim that they find learning platforms most useful as stores for learning and teaching resources and, secondly, as sources of information about pupil progress. However, overall survey evidence suggests they are still used very infrequently, if at all. Around two thirds of teachers said that they rarely used these in lessons. Even where learning platforms are in place, some teachers are unaware of their existence or what they could be used for.
- In contrast to the mixed picture at school level, local authorities' strategies for technology in schools are more strongly influenced by national priorities and initiatives. Nearly all local authorities report that their strategy incorporates learning platforms (97%) and an online learning space for every child (96%).

There is very limited understanding of LP use both to support CPD in general and to support teachers in their use of LPs in a school. This and the other research activities to be carried out by ITTE members, seek to address this situation. The resulting reports will inform Becta's understanding of current provision, and indicate whether additional advice and guidance can be offered on the strength of the evidence collected. It is also hoped that they will be informative to policy makers, HEIs and researchers.

Annex 2: Learning platforms and CPD: interview schedule for HEIs

ITTE has been commissioned by Becta to undertake research on CPD in relation to learning platforms. The framework here is intended to be used for colleagues who are writing case studies of the use of learning platforms, in HEIs, to support ITT, CPD and training in general.

We are collecting data on the following question:

What practice can be identified in HEIs about how learning platforms are being used to support tutors providing ITT and CPD?

This research complements that being undertaken for the Becta/ITTE report drawing on an HEI/ITT survey of LPs. The following questions form the basis for a semi-structured interview and data collection on the HEI case studies.

Section 1 – Profile of the HEI

- 1.1 Name
- 1.2 Location
- 1.3 Approximate size (number of trainees)

Section 2 – Background and context

- 2.1 What Learning Platforms(s) (commercial, open-source, in-house) are used?
- 2.2 Why this system?
- 2.3 How and why are you using the LP to support ITE?
- 2.4 How have you/your HEI prepared tutors to use the system to support initial teacher education?
- 2.5 In what ways do you use it in the PGCE and other education programmes?
- 2.6 How do you prepare student teachers to use Learning Platforms in their schools?
- 2.7 What are some of the professional development and pedagogy issues behind these areas?

Section 3 – Training

Please answer the following questions with respect to the training that is provided for you and colleagues who are HE tutors in your institution in the use of LPs to support the delivery of initial teacher education courses (and CPD e.g. Masters level programmes). Specifically:

- 1.1 Do they/you take it up?
- 1.2 If so, types and approaches to training and support is/are effective?
- 1.3 If they/you don't take it up, why not?
- 1.4 Do your ITT and CPD students use the material you put up on the LP? If not, why not?
- 1.5 Use of LPs in your institution: are more advanced functions used such as discussion forums, facilities for trainees to upload materials, coursework? Are there examples of innovative use facilitating interaction between and among trainees and tutors? Please give examples.

- 1.6 Is there sharing of practice between tutors?
- 1.7 What skills and competences do you think are essential for tutors to possess if they are to use LPs effectively?
- 1.8 Can you describe content available for your training and developing use of the LP, which was particularly effective?
- 1.9 Which factors do you consider to be significant in supporting and hindering tutors' use?
- 1.10 Is your use of LPs a focus for discussion at your annual appraisal interview/performance management review?
- 1.11 Can you give any examples of the effective use of the LP in CPD you deliver?

Thank you for agreeing to participate in this case study of HEIs use of learning platforms and related CPD issues.

In keeping with ethical guidelines, the data will be anonymised. Please inform us, however, if you would be agreeable to having your HEI named should this opportunity arise with respect to dissemination of best practice.

Annex 3: Learning platforms and CPD: interview schedule for Schools

ITTE has been commissioned by Becta to undertake research on CPD related to learning platforms. The framework here is intended to be used for colleagues who are writing case studies of the use of learning platforms in schools; how teachers are being prepared and supported as part of their CPD, to use the LP, and the use of the LP to support CPD in general.

We are collecting data on the following question:

What practice can be identified in schools about how learning platforms are being used to support serving teachers as part of their CPD to use the LP and, use of the LP to support CPD in general?

The following questions form the basis of a semi-structured interview. The language is to be adapted to the context of the specific school/teacher being interviewed.

Section 1 – Profile of the school

- 1.1 Name
- 1.2 Location
- 1.3 Approximate size (number of pupils on roll / number of staff)

Section 2 – Background and context

- 2.1 What learning platforms(s) (commercial, open-source, in-house) are used?
- 2.2 Why this system?
- 2.3 How and why do they use their LP to support teachers' CPD in general? (- an exploration of practice around the use of the LP to support CPD in general)
- 2.4 How do they support teachers through CPD to understand and use the LP effectively in their teaching and with learners? (- explore practice around how teachers are being prepared and supported as part of their CPD, to use the LP)

2.5 What are some of the professional development and pedagogy issues behind these areas?

Section 3 – Use of LPs in schools to support CPD plus factors supporting and hindering use

Please comment on the training / support given to teachers within schools and by local authorities or by commercial suppliers, in using such systems, both in terms of skills/functional understanding and practice/pedagogical understanding.

More refined questions: Please answer the following with respect to the training that is provided for teachers in the use of LPs. Specifically:

- 3.1 Do they/you take it up?
- 3.2 If so, what types and approaches to training and support is/are effective?
- 3.3 If they/you don't take it up, why not?
- 3.4 Do staff put up materials on the LP for learners and the curriculum? If not, why not?
- 3.5 Use of LPs in your school: are more advanced functions used, such as discussion forums? Are there examples of innovative use facilitating interaction between teachers? Please give examples.
- 3.6 Is there sharing of practice between teachers? And between schools?
- 3.7 What skills and competences do you think are essential for teachers to possess if they are to use LPs effectively?
- 3.8 Can you describe content available for your training and developing use of the LP, which was particularly effective?
- 3.9 Which factors do you consider to be significant in supporting and hindering teachers' use?
- 3.10 Is your use of LPs a focus for discussion at your annual appraisal interview/performance management review?

Thank you for agreeing to participate in this interview of your school's use of learning platforms and related CPD issues. In keeping with ethical guidelines, the data will be anonymised. Please inform us, however, if you would be agreeable to having your school named should this opportunity arise with respect to dissemination of best practice.

Annex 4: Writing frame for case studies

Case studies of learning platforms and related CPD issues: higher order questions to inform the write-up of the interview data

Background

- Profile of your institution (HEI / school)
 - What system(s) do you use and how was that choice made?

Context and Usage

- How is the learning platform used?
- Examples of good practice (learning and teaching)

Training/CPD/Staff development for using the Learning Platform

- How have tutors developed the knowledge/skills/understanding (KS&U) to use the system in effective ways?
 - o Technical knowledge/skills/understanding
 - o Pedagogical knowledge/skills/understanding
- Both – What type of support – on a continuum from Formal/structured to informal/unstructured (models of CPD) can be identified

Training/CPD/Staff development *via* the Learning Platform

- To what extent does the LP support professional development of staff?
 - o For what aspects of teacher development
 - o Examples of how it does this
- Again where does this sit on the continuum of Formal/structured to Informal/unstructured; what models of CPD can be identified

Affordances and Barriers (this is to be investigated for each sub-topic above)

- What factors can you identify which have facilitated the effective use of LP in these areas?
 - o Trainee/pupil use
 - o Tutor/teacher use
 - o Use for staff development
- What factors can you identify which have held back the effective use of LP in these areas?

Annex 5: Methods used to collect the data

To identify case studies of LP use in initial teacher training and schools, data was drawn from current and past surveys of ITTE members, the academic and other literature and the researchers' own knowledge of the sector.

In the identification and consideration of each case study, attention was given to the context in which the various activities were taking place, in order to be clear about the various factors that have led to the development of such practice and to make clear where practice may arise from a set of unique factors and where practice may be judged to have wider application.

Given that initial discussions have indicated that there may be in teacher education at least, a significant number of valuable case studies to research, the intention of this study is to allow them to be investigated in more detail, especially where such practice has not been recorded or written up. The specific research questions are set out in Annex 2 and 3 with the writing frame for the case studies included in Annex 4. The data for this report was collected through the analysis of 12 case studies collected in February to March 2009 from six HEIs and six schools. The data for the case studies was collected from HEIs (ITTE members) and schools and through visits and interviews with key personnel.

Sample selection

The rationale for selecting the sample of HEIs and schools is provided below.

Schools were selected to incorporate at least one ICT leading-edge primary/middle school and one secondary school and a second, primary/middle school and secondary school that are trying to make changes with respect to their use of the learning platform. The method of selecting these schools was through the professional links that researchers have with partnership schools, such that respondents are selected on the basis of knowing that they are leading in the field and those that are known to be wishing to change.

A fifth case study school included a unique opportunity to look at LP use in a school that was burnt down; during the closure and rebuild, the LP became integral to the working of the school.

The selection of HEIs: the range of HEIs was chosen as they represent good examples of learning platform use; these HEIs are known to be good for teacher training and known to have well developed learning platforms. With respect to the rationale for selecting leading-edge examples, these were known to have been the focus of considerable research and publication. Additional HEIs were offered to provide a Welsh perspective and a university which has developed a bespoke learning platform that was especially commissioned.

The case studies were informed by data collected through interviews. The rationale for interviews is that this method allowed for an exploration of the content issues and the 'how and why' aspects of practice, which could be investigated sensitively and in greater depth. All contact with schools was recorded and managed carefully.

Where data was to be collected from schools, a half-hour interview was to be requested to minimise workload.

Annex 6: Case Study A – HEI Wales

HEI Profile

This HEI is situated in Wales and has an approximately one thousand students on its ITT and CPD programmes. The university has adopted the following Blackboard and PebblePad.

Context and usage

The Secondary PGCE, Primary PGCE and BA(Ed) use an LP course for making administrative material available; for supporting ICT in subject teaching with pedagogical guidance, software guides and downloads; and for supporting the weekly Professional Studies Lecture and Seminar with readings and presentations, and the associated assignments.

The Secondary PGCE also provides a subject-based LP course for each of 11 subjects offered, to which mentors in schools are also given access.

The MA and PGCE PCET provide copies of all readings, presentations and assignment briefs and use the LP forum facility for communications with students, who are all part-time.

Examples of good practice (learning and teaching) include: Secondary PGCE ICT specialists use PebblePad for action planning and for sharing/peer evaluation of resources; a wiki is used during classes for contributing group reports to whole-class discussion and during school placement for sharing experiences, resources and advice; the 'virtual classroom' runs tutor-led sessions for students located all over south Wales, with shared whiteboard, questioning and discussion.

Secondary PGCE Maths and Business Studies use discussion forums for submitting summaries of sessions and group responses to issues seeded by tutors.

Primary PGCE and BA(Ed) courses use file submission and response features to provide formative feedback on lesson plans and resources; the ICT tutor runs a blog for the Professional Studies course and the ICT specialist course, and encourages students to set up their own blogs for reflection on school experience – these are often continued by former students, enabling current students to gain advice; also a wiki is used to support student ICT projects, including exchange visits with US students.

MA and PGCE PCET tutors use a forum to raise issues and gain responses from students.

CPD and training for staff on the use of the learning platform

Training is provided at two levels:

- First, at university level, from the e-learning officer who offers bookable formal, structured workshops at introductory and intermediate level together with follow-up informal support in LP course production and administration. These have a technical focus, but the officer is an ex-teacher and so tends to stimulate pedagogical thinking too.

- Second, at programme level, when course teams undertake collective professional development in the context of their particular teaching area, led by a team member or external provider with specific expertise. These are usually less structured and more pedagogically focused with technical aspects brought in as appropriate.

The university workshops and follow-up are very well received but currently not all programmes require staff to attend. The programme-level training is compulsory as part of general programme team work.

The Secondary and Primary PGCE teams received introductory LP training some years ago and have discussed/shared strategies for its use with students occasionally since then. More recently, more advanced training has been undertaken by the Secondary team with the explicit aim of using ICT to support more dialogic teaching. This covered wikis, blogs, action plans and e-portfolios, which are now being put into practice by many tutors.

In addition to the specific sessions, the School of Education ICT Co-ordinator provides support for individual tutors on request. The specialist ICT tutor for Primary Phase courses also provides informal support for other tutors. On the Secondary PGCE course, the ICT specialist PGCE students undertake a course in cross-curricular support, and learn to support their peers in using ICT for subject teaching. Use of LPs is part of this course, and the ICT specialist students provide help in using the LP, not only for other students, but also for the subject tutors to whom they are attached.

CPD and training for staff via the learning platform

None

Affordances and barriers

The learning platform is mostly well used in ITT because tutors expect it and because ICT is part of their course. In the Primary courses, all students have an extensive ICT element of their programme, and are expected to use the LP to support this work. In Primary and Secondary PGCE, the LP is the primary means of access to materials for all aspects of the course. The requirements concerning use of ICT in subject teaching have stimulated all tutors to develop a substantial ICT component of their subject courses, and use of the LP is part of this element. (See also technical support below)

The Head of School is a leading researcher and writer in ICT and pedagogy, along with the ICT coordinator and a number of ITT staff. Furthermore, the Secondary PGCE Programme Director has substantial understanding of ICT in subject teaching and has been an evaluator for national projects (NOF and ICT-based curriculum materials in geography, for example), and this interest at management level affects the level of expectation and support for use of ICT across the programme team.

Student pressure is also significant in Secondary PGCE, particularly from ICT specialists, D&T, Business Studies and Science specialists.

Faculty and university technical support are both good: students are enrolled onto the LP from the first day of their course and any access problems are quickly resolved. The e-learning team across the South West Wales Higher Education Partnership (Swansea Metropolitan, Swansea University and Trinity College Carmarthen) work together on training sessions and have produced a number of brief guides to carrying out tricky processes with the LP.

Factors that have held back the effective use of the LP:

- For some tutors, particularly those who work part-time, using ICT is not a natural part of their work and they see learning new tools as a barrier rather than an opportunity.
- In many part-time CPD courses, ICT use is not expected and students do not need to access the LP regularly. This makes access more difficult when they do try to use it.

Annex 7: Case Study B – HEI East of England

HEI profile

This East of England HEI is a medium-sized university based on a large campus. The university is middle ranking in terms of its academic outcomes but regularly tops the league tables in terms of student satisfaction. In the School of Education and Lifelong Learning (EDU), the HEI take a variety of students from both the local area and beyond on the Primary and Secondary PGCE teacher training programmes. The HEI run a variety of offers for serving teachers to engage in CPD including a Doctorate in Education, an MA programme with taught and research routes and short continuing education programmes which are not directly associated with teaching but often attract teachers (such as a Certificate in Archaeology or Certificate of Continuing Education). In addition, for those who are considering teaching as a career, there is an undergraduate programme including BA in Education Studies (with a specialist sports option) and for undergraduates in other schools, the Student Associates Scheme, which offers degree credits for structured volunteer work in schools.

Context and usage

In 2001/2 the university began to develop the use of its Blackboard LP as a teaching tool and in 2002/3 it began to be used on the Initial Teacher Training programmes. In 2006/7 the Blackboard LP was packaged into a larger learning platform known to the students as 'The Portal' that allows them to access information, learning resources, the library, email and so on through a single 'one login' home page.

Staff have been supported in developing their pedagogy to include the LP by a small but dedicated team of Learning Technologists as part of the Staff CPD offering of the university. Although the programmes have not been specifically aimed at those involved in ITE or CPD for teachers, the Learning Technology team have been very supportive in helping EDU tutors to develop their practice in the specific context of teacher education. This has been in terms of general courses and specific tailored support. All new teaching staff are required to undertake the Masters in Higher Education Practice (MA HEP) course, in which technical and pedagogical professional development using the LP is both a compulsory part and can be a more detailed additional optional unit.

The following programmes in the School of Education and Lifelong Learning use or have used the LP to some extent:

Primary PGCE

Secondary PGCE

Taught MA programmes in Education, Applied Educational Practice, Counselling and Focussing

BA in Education

Student Associates Scheme (pre ITE school experience)

All the programmes (with the exception of Student Associates which abandoned its use of the LP – see below) use the LP for basic noticeboard /email /file sharing purposes. In addition, some notable examples of interesting practice include:

- Primary PGCE students posting lesson plans on a discussion board from their student-led mathematics workshops which is creating a large repository of lesson plans available to the whole cohort
- Secondary geography PGCE students use the file sharing area to exchange teaching materials
- MA students (serving teachers) are provided with pre-seminar reading – the electronic format makes it easier for them to search and use the papers they are given
- For both Primary and Secondary PGCE students, sections of key texts are posted the LP, making it easier to access important reading (with cohorts of 180 and 200 respectively, the students find access to books difficult when the library will only hold half a dozen copies of any one text)
- Primary PGCE students work their way through the English Audit assignment using documents and links provided on the LP.

CPD and training for staff on the use of the learning platform

Tutors have access to three main sources of support:

- First, courses provided by the university's own professional development department (<http://www.casestudy.ac.uk/csed/programme/acad>) —scroll down to Learning Technology Group. These courses are structured and tutors can follow the whole course or pick and choose. These are compulsory for new tutors as part of the MA HEP.
- School of Education based training sessions (led by in-school staff). These are led by tutors in ITE and look at using aspects of the LP for specific teacher training related purposes. All tutors are invited to contribute something to the sessions and all are invited. These run on a rolling programme and are structured by those attending and presenting.
- Peer support, which is provided in an informal way by tutors supporting one another. There is no formal structure for this, although most requests for help are fielded by three of the 20 or so PGCE staff.

Pedagogical development has proved to be more difficult than technical training, in that to be effective tutors need to have time to look at their practice as a whole rather than just look at the LP-based practice. However, all three of the modes of technical training above have had a pedagogical element to them.

In addition, on the Primary and Secondary PGCE, development of LP use is enshrined in formal university based course development and Ofsted SED documents. This adds structure and formality to the arrangements described.

CPD and training for staff via the learning platform

Course information and booking are available via the Portal, but with the exception of the MA HEP (MA in Higher Education Practice – a course for new lecturers) the LP is not used in delivery in most ITE staff courses. It is widely used by the University

for Management training, but we are not aware of any ITE tutors accessing management training.

There are online courses available, for learning how to use the LP, with materials on the LP (in addition to face-to-face training), but not in other aspects of tutors' professional development.

The Primary PGCE team experimented in using the LP as a medium for communication between the course team, and although Ofsted praised this, this has now discontinued and the main electronic medium for communication amongst the course tutors is now non-LP based email.

Affordances and barriers

Students on ITE programmes now regard using the LP as simply part of their learning experience. They use it both in face-to-face teaching sessions and to support other teaching activities. Anecdotally, tutors find there is a correlation between those students who do not engage in the LP and those who do not engage in face-to-face teaching on the course. Staff commented, 'We no longer find (as we did in the first few years of the LP) that those who do not use the LP have low levels of IT competence – the vast majority of our students are competent in using internet based resources and communications tools at the beginning of the course'. A survey of students at the beginning of the Primary PGCE revealed that:

- 99 per cent of students agree that "I can use the internet to locate and download materials I need. I know how to use the favourites and history tools to previously visited sites."
- 95 per cent of students agree that "I can use online forums and discussion board to communicate over the web"
- 88 per cent are members of an online social network such as Facebook, MySpace or Bebo
- 99 per cent have already had some experience of using an LP in their learning.

On the CPD courses, take-up and use is more patchy, and not all students use the LP, but this is improving year on year.

Trainee barriers: the most significant barrier to ITE student use of the portal is that the environment is designed and run to fit an undergraduate, modular mode of teaching over a shorter academic year. In this way the LP fails to meet the needs of ITE students in a number of ways:

- For four out of the past six years, the LP has been either partly or wholly unavailable to students at the beginning of the PGCE courses. This has been due to the courses starting before undergraduate teaching begins, when IT registration and the LP were not ready for students to use.

- Students lose access to the LP on the last day of the course, although they have repeatedly asked for access over the summer as they prepare for transition to their induction year. Tutors have passed on this request to central university IT management who maintain that when students cease to be bound by university regulations (on the last day of the course) it violates the terms of their licence to allow access. For this reason the Primary PGCE English tutor is now running her book wiki outside the university LP so students and teachers can remain in touch after the course ends. Many tutors also remain in contact with former students via Facebook. This lack of flexibility has also meant that the Student Associate Scheme have abandoned their early use of the LP for providing materials and communications tools – they needed continuing access for students on the programme after students graduate (as many continue to volunteer in schools).

Use of the LP for student-to-student communication has diminished over the past few years, many students giving the reason that communication and collaborative working is easier and quicker via other web-based means (MSN, Facebook and Google docs being the most regularly mentioned).

Tutors: all ITE and most CPD course tutors have made use of one or more of the training and support mechanisms described above. Opinions about which are the most effective are mixed, although many tutors commented that they would like to have more time to take up the formal training offers provided within EDU and by the university. Arrangements for designated professional development time for tutors remain unclear, while the university is in the process of reviewing lecturer contracts. However, the head of the School of Education and Lifelong Learning remains committed in principle to designated professional development time.

An important affordance for tutors' use of the LP is when it enables them to do something more effectively than previously. A good example of this is online course evaluation and data collection. Where tutors are able to assess student confidence in subject knowledge (this is done in Science and ICT on the Primary PGCE, for example) and where courses can be regularly evaluated to help tutor planning (on the Secondary PGCE), tutors are motivated to use the LP over other forms of data collection because the electronic data is easier to collate, analyse and use.

In what is an increasingly digital educational world, students expect tutors to use the LP to support their face to face teaching. The vast majority of Primary PGCE students have used an LP previously and also use social networking in their daily life. This crucial element of 'student pester power' has been particularly effective in motivating tutors who were not yet using the LP to respond to informal student requests and more formal student evaluations to at least make some use of the LP by posting announcements, lecture notes and other digital resources.

Tutors in ITE are also subject to influence from outside bodies, most importantly Ofsted and external examiners. On the Primary PGCE, Ofsted inspectors praised the use of the LP (during the 2004 inspection, they had not come across similar practice in ITE elsewhere). The Secondary PGCE geography tutor noted that when the course was subject to external HEI examination, the tutors were encouraged to make more use of the available LP resources.

However, a significant barrier to tutor use concerns some of the decisions made at university level about the nature and structure of the LP. Although at individual course level the LP support team have been willing to respond to tutors' needs, policy decisions have not always reflected the size of the ITE cohort (much larger than most undergraduate module cohorts) the times of the terms (September 1st to July 1st) rather than mid-September to early June. Three difficulties have recently been encountered:

- One ITE tutor received funding from the university's professional development budget to examine the use of e-portfolios, but shortly after the award the IT service withdrew from providing an e-portfolio tool via the existing LP. The tutor concerned is now looking at other 'off the peg' e-portfolio tools.
- Large cohorts and complex course structures mean that ITE courses quickly outgrow LP provision that is designed for shorter, less complex undergraduate modules with fewer students. File upload sizes and course sizes are regularly exceeded, and although these can be increased, the default size is not sufficient for the needs of ITE.
- Registering to use the LP has proved difficult for some CPD students who are not based on campus as they are serving teachers, as well as mentors with the PGCE programmes.

Affordances of use for staff development: one significant element of staff and course development for both the PGCE courses is supporting in-school mentoring of students. Both the Primary and Secondary PGCEs have tried to register mentors on the LP and use it for communications. This has not proved easy although the Secondary course now uses the LP to link with school mentors with some success. This is an area for development on the PGCE course.

Barriers to use for staff development: the LP provides significant opportunities to make meaningful links with school mentors, which would support staff development of both the mentors and tutors in ITE. However, the above problems with registering, as well as the repurposing of the LP into the larger learning platform, mean that serving teachers are unlikely to be inclined to wade their way through the mass of irrelevant material on the learning platform to get to the parts of the LP they need. A learning platform that could be more easily tailored at course level would help in this area.

Annex 8: Case Study C – HEI West Midlands

HEI profile

This West Midlands case study is based around the Secondary and Primary Initial Teacher Education programmes within the School of Education. The primary department has several hundred trainees at any one time on a range of BEd. and PGCE courses. The secondary department offers GTP and PGCE courses in a range of secondary subjects including English, Maths, Science, ICT, MFL, D&T, PE, Business Studies and Psychology. There are approximately 150 to 200 trainees on each of the GTP/PGCE routes at any one time.

The School of Education is based in a new multi-million pound purpose-built building. All lecture theatres and teaching rooms offer a standard set of equipment including at least one interactive whiteboard and an AV console with DVD and PC facilities.

Context and usage

The LP is a bespoke system called BEAR. It is now in version 2 and allows all students and staff access to 'Topics' which are set up within schools to allow for information sharing within Modules. There is also the facility to set up Topics not linked to Modules.

A drawback is that log-in is linked to the university 'system' and so anyone wanting to use the LP has to be a student registered on a course (and who has paid all fees up to date etc. or they get locked out), or a member of staff. Access for people outside the University such as school mentors is difficult on a practical basis.

BEAR was designed within the university and whilst it might be well suited to the university, nobody outside the university has heard of it or uses it. This presents challenges (coupled with the log-in issues) for trainees on school placements. Within the past four years other systems such as Moodle and Blackboard were investigated but the decision was made to stay with BEAR. This is now developed to BEAR 2 and has added features not found in BEAR 1.

Virtual learning via BEAR

The university's web-based learning platform, BEAR is a key system used by students and staff to support learning in almost every subject area, making the university a leader in online learning.

BEAR provides a range of tools and facilities by which tutors can deliver enhanced learning material in support of classroom-based teaching and tutorial contact, and engage students actively in the learning process.

As well as providing a content repository for tutors to make available any reference material, notes, media and documents related to a subject or module of study, BEAR offers collaborative tools to facilitate discursive activity among classes and smaller workgroups.

A range of integrated tools is provided to assist students in managing their study-related activities, and monitor progress within the context of the materials being

used. BEAR's communication tools increase opportunities for tutor interaction with individuals, workgroups and the class.

LP availability on and off campus

BEAR is built with Microsoft technologies, and is delivered via standards-compliant web browsers and is therefore usable on multiple operating system platforms. BEAR is available for use both on and off campus by staff and students.

Currently there are over 2,000 available BEAR 'topics' in support of modules of study across the university, with a further 600 in development by tutors. BEAR has over 20,000 subscribed users amongst university staff and students.

BEAR has a wide range of uses but the basic use is to provide a place where academics can put notes and information for students following taught sessions – an information repository. So typically, following a lecture the PowerPoint (if used) would be placed on the LP along with any handouts etc. The Module Guide would also be here along with useful URLs and other files.

Students also upload their own files, often as part of assessment; this is often peer reviewed using a forum. Examples of this would be interactive worksheets, reviews of a book or a piece of software or website, and group presentations.

Forums are widely used, especially now BEAR offers several formats, for follow-up discussions between groups of students which may or may not be part of an OLT (On Line Task). These are also used for assignment help and during placement for students to keep in touch and ask for help. This last usage is particularly appreciated by the trainees as it allows them to keep in touch with each other whilst on school placements by themselves.

It is now possible to upload podcasts and the students can also use the 'podcatcher' (an RSS feed aggregator) within BEAR to collect together other podcasts from anywhere on the Web. One technical limitation at the moment is that podcast files are limited to 10mb.

BEAR is often showcased on Research days where staff present their work to their peers. Some staff are currently using BEAR to collaborate on a book – they initially tried using 'Wet Paint' but more staff were familiar with BEAR so they switched. Examples of good practice include:

- Peer review
- OLTs – On Line Tasks (including providing electronic feedback on assignments and notes on trainees' 'reflective journals')
- Use of forums – both for specifically assessed discussions and helping trainees feel a sense of community when out in schools on their placements
- Podcasts for group feedback or review of lectures or techniques, revision etc.
- Use of wikis to develop understanding

- Development and use of interactive Flash-based tutorials using free software 'Wink' [<http://www.debugmode.com/wink/>].

CPD and training for staff on the use of the learning platform

When staff first come into the university there is a training session with the TSL (Technology Supported Learning) Co-ordinator where BEAR and other aspects of technology-supported learning are explained. The TSL Co-ordinator is then available to help with both technical and pedagogical issues either on a one-to-one basis (face to face or by email) or for training sessions for groups of academic staff, where particular training issues are identified by groups of staff.

There is also extensive help available on the LP provided by the BEAR team. In addition there are frequent BEAR training sessions provided by the ILE (Institute of Learning Enhancement) on all the campuses in the university.

However, anecdotal feedback from several colleagues indicates that despite the wealth of training opportunities that are available, they are mostly self taught, or as one colleague put it '...picked it up by talking to others and watching others and working with others... and helping put stuff on it for others'. This approach appears to be common and could be due to ignorance about training opportunities available or could be due to the fact that staff are very busy and like to learn what they want to learn, when they want to learn it – and informal, peer training offers this kind of opportunity.

CPD and training for staff via the learning platform

There is extensive help available on the BEAR topic for technical help. The School of Education is in the process of developing a BEAR topic to further staff development specifically aimed at education.

In the secondary department, all ICT trainees are required to develop and deliver a module of work to either Key Stage 3 or Key Stage 4, using a LP. This forces the trainees to engage meaningfully with a LP as this work forms a large part of their final subject-specific assignments. Feedback from trainee evaluations indicates that they almost all found it useful and challenging and were glad that they were made to do it. It does not seem surprising that if keen, enthusiastic ICT trainees only engage with teaching via a LP when compelled to do so that many other staff are often reluctant to use the technology themselves. These ICT trainees were also very familiar with this LP as their course was delivered via Moodle (rather than BEAR, given the restrictions imposed by BEAR) and they rated it highly, finding it very useful – they just did not want to try and teach with it themselves.

Affordances and barriers

The factors that have facilitated the effective use of the LP for:

Trainees: all students have a BEAR account when they join the university. It is widely used by most academics and so the students quickly become familiar with its use. It is a 'one stop' facility where students can get a great deal of information about the modules they are studying.

Tutors: BEAR is part of the induction programme for all staff. Topics can be quickly created and administered. Topics can be administered by several staff.

Use for staff development: this is an area that has, up to now, been little used. It is in the process of development in the School of Education.

The factors that have held back the effective use of the LP in these areas:

- It has to be a 'one size fits all' for 22000+ students and 2000+ staff, so there are things that other systems can do as well or better. Uploading large documents or files means that content-rich files that contain audio and particular video are difficult to deal with.
- There is a problem with the closed nature of the LP which means that giving access to staff outside the university such as school-based mentors is difficult. It is not suitable as a platform for trainee teachers to use within schools with their pupils, so some have to use Moodle for that purpose.
- It is very difficult for students to make BEAR their own as there is little personalisation. Interaction and collaborative learning is tricky due to the large number of students subscribed to some topics. There are some elements of Web 2.0 used – so far as there is a wiki facility, podcasting (albeit limited) and some collaborative elements in the forums/blogs but not to the extent that some Web 2.0 applications allow collaboration. As with all new software, the system is 'buggy' and response time from the support team varies from week to week.

Annex 9: Case Study D – HEI Yorkshire and Humberside

HEI profile

This HEI is based on the outskirts of a large city with just under 3,000 students. All the undergraduate degrees and postgraduate studies are accredited by a larger university, and most have a professional focus. The HEI runs a four-year undergraduate programme for teacher trainees, a one-year PGCE Secondary course and a SCITT. It also runs a Foundation Degree and HLTA courses as well as offering CPD for teachers and a Masters Programme for Primary and Secondary teachers.

Context and usage

In 2004 the education faculty was successful in a bid to the TDA for funds to develop e-learning with a particular focus on developing a learning platform to enhance communications between students, college tutors and school staff during school-based training.

At this time the HEI had access to an online learning system which was hosted by the larger accrediting university. It was evaluated against the ways in which staff wanted to develop e-learning, but initially they were focusing wholly on school-based training. At the end of the evaluation it was decided that it would not support the HEI's aims and they decided to look at alternatives. These included WebCT, Blackboard and other commercial products and although each had its own merits, the cost of licences was a significant factor in deciding to look elsewhere.

Moodle was brought to their attention as a possible way forward, not least because it is Open Source software and the cost for web hosting is not prohibitive. Although it is described as a content management system, their evaluation and trials suggested that it had the tools which would enable a trial to go ahead and could be used as a learning platform for the future.

Six students from each of the Primary and Secondary courses volunteered to participate, and college tutors, school-based staff and the trainees were involved in training sessions on the use of those aspects of Moodle which supported their objectives. These included the chat-room, forums and areas for saving work, sharing ideas and enabling communication between all the partners. The trial started prior to the students' placements and continued for between six and eight weeks whilst the students were in school. During this time everyone was encouraged to participate on a regular basis.

Although the participation started well and there was positive use of the tools, they noticed that as the school placement progressed, participation dropped amongst all partners and despite attempts to keep the trial going the posts, questions, and deposit of materials almost completely stopped. The subsequent evaluations identified the problem: although Moodle had the facilities it had become unnecessary to use them as other forms of communication became more useful to all concerned. In other words, they preferred telephone discussions, sometimes email but most often face-to-face discussions with school staff on a regular basis and with college tutors when they visited to check on progress and observe lessons. In terms of the initial aims, the trial had not been a success but there were lessons to be learned.

Following evaluation and talking with colleagues in other institutions it was decided to use Moodle to support the taught courses and to support the Leeds SCITT in the next semester.

It had become clear in the evaluation that if the LP was to be effective in supporting teaching and learning there needed to be a clear reason for students and staff to use the facilities Moodle offered. It was evident that training in skills would be needed to ensure easy access but also a clear understanding of the pedagogical benefits.

During the rest of 2004 and into 2005 the area for the Leeds SCITT was developed and further education courses were added following demonstrations of the potential of Moodle to colleagues, and the potential of the technology to support teaching and learning was realised. Training sessions with staff and students contributed further to the learning platform and whilst the first courses tended to be a repository of documents, web links and basic use of the tools, there were some who wanted to introduce other aspects such as multimedia, video clips, the use of quizzes and other tools.

As the trial continued there was a need to develop technical aspects within the site to enhance the front end and access. These included:

- development and updating of the MySQL database
- upgrades of Moodle itself
- adding optional modules such as the questionnaire and the book
- upgrading PHP
- upgrading the upload limit
- media filters to facilitate the use of video, podcasting and other multimedia resources.

In 2006 a staff development session showcased what had been achieved so far. From this session the interest and participation widened and as well as education courses, colleagues from other areas such as psychology, theology, English and history started to develop their own areas.

In 2007 the usage had increased significantly to the extent the college decided a part-time e-learning adviser was needed to develop Moodle further and a new Principal supported the move to Moodle as the College LP. The table below shows the increased usage statistics from 2004 to 2008.

Month	Months	Visitors	Visits	Pages	Hits	Bandwidth (Mb)	
						Monthly	Mean Daily
Sep-04	0	7	35	78	78	0.02	0.00
Oct-04	1	11	50	122	122	0.02	0.00
Dec-04	3	32	47	862	2206	29.74	1.28
Oct-05	13	422	1243	62222	150817	999.96	32.26
Nov-06	26	1205	4068	128059	351555	5826.56	194.08
Nov-07	38	2075	6260	182714	500036	8509.44	283.80
Oct-08	49	1177	2980	210357	874282	11765.76	692.21

Table 1 Increased usage statistics from 2004 to 2008

The last two years have seen a huge increase in the development and use of the LP, as can be seen by the following key indicators:

- The number of registered users is now more than 3000; 67 per cent enter the site from a bookmark or typing the URL directly; 25 per cent come from the intranet, VPN, website link.
- Each visitor is viewing an average of 70 pages per visit in an average visit time of 12 minutes. This suggests a behavioural pattern at the moment of scoping and checking although it is ample time to download key documents if necessary.
- Since March 2008, the number of online course areas has increased from around 140 to more than 330.
- The bandwidth has also increased from 587Mb per month to 23,140Mb.
- The table below shows the increase in mean daily bandwidth being used between 2004 and 2008.

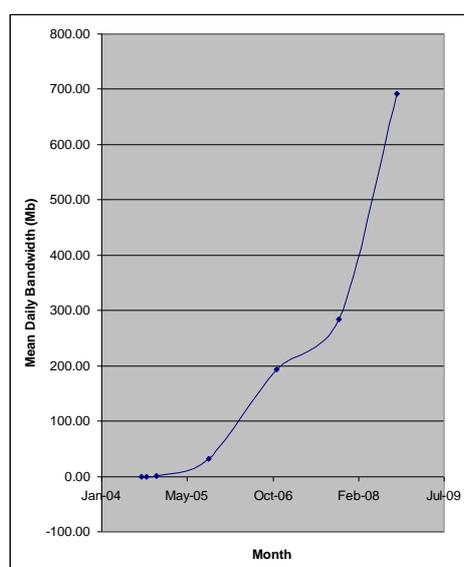


Table 2 Increase in mean daily bandwidth being used between 2004 and 2008

If the criteria for success of the LP from the initial TDA ICT grant in 2004 to the present day was one of usage and development it is reasonable to suggest that it presents a very positive picture. However, the LP needs to be seen in terms of teaching and learning, support for staff and students and where it is possible to measure, its impact.

It is clear that the LP has had an impact and the usage shows a very positive return for an initially small investment. The number of users has risen from 12 to over 3000, the number of online course areas has more than doubled and the bandwidth has

increased 30-fold. It is what underpins this data that begins to show impact in the area of teaching and learning from a wholly ITE focus to a college-wide impetus.

CDP and training for staff on the use of the learning platform

Although the HEI had access to an online learning system at the larger accrediting university prior to 2004 there were very few education staff using it. Whilst some tutors used PowerPoint, the integration of ICT into courses was very limited. At about the same time as the Moodle trial began the HEI invested heavily in interactive whiteboards in teaching rooms and these developments meant tutors needed skills training in both.

Training in the use of Moodle was carried out with individuals and groups, and as tutors began to show an interest. In the beginning it was wholly focused on using the basic tools in Moodle such as uploading files, putting in web links, titles, and labels. It was in this context that the initial use of the LP was as a repository for documents. Presenting course content on IWBs was also developed.

As more education tutors developed skills and became competent and confident using the basics of Moodle, they moved on to sessions which focused on pedagogical issues. This meant going from 'how' to 'why' and beginning to develop an understanding of how the LP could enhance teaching and learning. Over the next two years the following areas were addressed:

- Using Moodle as integral to the courses and modules
- Moving from a simple repository of documents to an environment with extended activities and resources
- Supporting staff in their skill development and helping them achieve 'ownership' of the courses they wanted to place on the LP
- Supporting a pedagogical approach to the use of the LP and identifying how the various tools could engage both tutors and learners
- Expanding and extending the materials available so that a culture of 'anytime, anywhere' access was developed
- Responding to teaching and learning needs through requests from staff and students.

As the use of Moodle expanded to other faculties and departments, the process of skill and pedagogical development, knowledge and understanding was repeated and the appointment of an e-learning adviser gave the LP even greater impetus. Staff development sessions and individual tutorials continue to give help and support when and where there is a need.

In the beginning the trial was focused on enhancing communication through school-based training and central to that aim were the students. This was not a success for the reasons stated earlier but the student experience remained central to development of the LP. The early stages focused on teacher trainees but the

expansion has begun to include other areas as well as students who are not full time at the HEI or may be involved in distance learning, including teachers who were participating in CPD and Masters modules.

The support for 'off site' users required training to ensure they could access the materials and resources. This was done partly by setting up online tutorials and partly by face-to-face sessions where further skill development and support for its pedagogical use was explored. Support is available for queries, questions and enhancement which arose from enquiries. These were, in the first instance, by email or telephone but gradually the use of the forums and a bank of FAQs was established.

From questionnaires and other data collection they identified an increasing confidence and competence amongst the student body with some having experienced LPs in their schools prior to starting the course. However, very few were familiar with Moodle. This led to training during induction week for year one students in order for them to sign up and access the site and, for other years, individual course and module tutors took responsibility for their own groups as these were tutors who might be called 'enthusiasts' or 'champions'.

Staff evaluations and student feedback through module evaluation questionnaires show nearly 90 per cent positive feedback. An e-portfolio area is being developed and evaluated and students are now using the site for podcasting and blogs. Where courses and modules are on the LP, students now see these areas as integral to their learning both inside and outside taught sessions as well as when they are off campus for placements. Forums and discussions boards are used to contact students, get interim feedback and support learning in a variety of ways. The flexibility of Moodle and having it hosted outside the HEI allows students and staff to have control and ownership of their areas without having to negotiate HEI firewalls and other security issues.

From very simple beginnings, the LP is now central to both teaching and learning. Skills and knowledge about the tools and menus within Moodle continue to require support but they are now focused on enhancing different pedagogical approaches for tutors and students. Moodle has shown itself to be flexible enough to meet learner needs both on and off campus. Tutors are using multimedia, animations and simulations to support and extend face-to-face teaching.

As well as supporting documentation for courses students can use the quizzes to test their subject knowledge and get immediate feedback. The forums, online chat-rooms and other communication tools mean there are opportunities for dialogue between students and their peers, tutors and students and tutors and tutors.

Affordances and barriers

The development of the LP in this context was based in the Faculty of Education because that is where the initial interest and expertise lay. From its initial trial through to its adoption as the HEI LP has required a steep learning curve for staff, trainees and other students. It has required support and training for all of these participants as well as having colleagues who have the technical expertise to develop Moodle for their needs.

The funding received at the outset from the TDA allowed the HEI Department to host the LP so that it was not constrained by HEI firewalls, security concerns and other parts of the IT policy. This meant they have the flexibility to engage the participants in a way which would not have been possible had the IT services been the gatekeeper and not fully understood the pedagogical issues to be developed. The external web hosting has continued and they have found this to be of great benefit when expanding and extending the use of the LP for internal and external users.

The success of the project has been underpinned by a philosophy of mutual and professional support. At no stage has its use been imposed. All users have 'ownership' of their courses and inputs and know where they can ask for and receive help and support. There are still some areas of the HEI where the use of the LP is less than in others and there are colleagues who have yet to be convinced about how the LP could support them outside the traditional methods of teaching and learning.

Over a period of 5 years the LP has developed beyond anything we thought. The usage figures are a clear indicator of the way tutors and students use it to support teaching and learning. The support and encouragement of the senior managers at the HEI has enabled further developments and the e-learning adviser has been able to support cross HEI developments.

The materials on the LP are variable in type and style and the data collected suggests that where modules and courses are more than repositories of documents and include multi media, video links and clips, blogs and podcasts then students engage with the materials to a greater extent. There is a challenge to help others see the possibilities and potential.

The introduction and development of the LP has challenged some existing views on the way we teach and the way students learn. This has led to interesting and sometimes heated debate. Historically the HEI is no different to other HEIs where face-to-face lectures, tutorials and seminars have been where students learn. The use of technology and the LP does not replace these methods but requires consideration of how it can enhance the learning experience.

The challenge for the future is to keep pace with technological change so that it can be used to meet the needs of future learners and their preferred learning styles. For some tutors and students this may be an uncomfortable experience and need structured help and support. To integrate the LP further will require an approach which is both valid and pedagogically sound and encourage the independent learner. Being involved and having ownership of the future developments is seen as crucial as an imposed regime will lead to antagonism and perhaps frustration.

The HEI believes they are now reaching a point where they need to carry out a review of 'where we are' and 'where we want to go in the future'. This continued evaluation is necessary if the LP is to continue to be integral to provision and be seen as positive by existing and new tutors and students.

Annex 10: Case Study E – HEI London

HEI profile

This HEI is based in London with a population of 10,265 students; the percentage of mature students is 19.19 per cent and percentage of international students is 9.69%, with a male: female ratio of students 51:49. The focus of the case study is the ITT programme PGCE primary that has 220 students in the present cohort of 2008/9.

The learning platform used is u-Link, previously web-CT. The use of U-link on the PGcert course is determined by the university's adoption of the system and the resulting facilities available.

Context and usage

This system used contains the following facilities: announcements, timetables, handbooks, assignment guidance, lecture PowerPoints, lecture support notes, supplementary reading/journal articles in PDF format, discussion boards, subject knowledge audits, lesson plans, medium term planning , proformas, web links, workshop photographs, video clips/photographs of team building activities (mainly sports competitions) and uploading course tasks (but not coursework).

Trainees learn to use the facility on an ad hoc basis, as and when they need to access information or carry out tasks set. In the same manner and staff have learnt to use U-link as a result of the move to provide more information via this means. This has been achieved mostly informally, with peer training on a needs-based process. One member of the team, usually a technician, attends training provided by the university and uses this learning to support the requests of the teaching staff.

Examples of good practice (learning and teaching) include the discussion section of the LP being used for knowledge construction to supplement the more didactic lecture sessions and other forms of independent learning by trainees. In 2006, a study was carried out which looked at trainees' usage of the discussion board, including the barriers to effectiveness.

CPD and training for staff on the use of the learning platform

Each school within the university has a designated liaison support person, whose main role is to support teaching staff with u-Link section development. Each School and Central Service is allocated a liaison person who provides advice, support and demonstrations of a tool or feature.

There is also a structured programme of formal training which staff attend voluntarily. The topics for the sessions are as follows:

An introduction to u-Link – A session covering the basics of getting started; following the session participants should be able to develop a basic section independently.

Using the u-Link Assignment Tool – how to create an electronic assignment submission facility

Administering u-Link – transferring content and repository management. This one-hour workshop is designed to show administrative staff how to transfer existing content packages from WebCT Campus Edition into the u-Link repository.

User Management – a one-hour workshop offered to the School administration team to assist with establishing and maintaining staff access to sections.

Creating and Managing u-Link Assessments – an introduction to the assessment functionality, allowing staff to create evaluation surveys and quizzes, including multiple-choice tests for students.

Communicating with Students – how to use u-Link's communication tools to enhance learning and facilitate interaction and collaboration.

In addition there are also Advanced Academic Practice Workshops (AAPW). This programme is aimed at all academics. The purpose of this series of workshops is to encourage, disseminate and discuss good practice with academic staff. The presenters include both external expertise and internal expertise and topics cover, for example, creating interactive u-Link learning objects from Microsoft Word documents, 'Lectures –Play, rewind and learn', developing u-Link assessments for feedback to students, supporting student learning and personal development by means of u-Link e-portfolios. Tailored u-Link training sessions for groups can be delivered on request.

All these training sessions cited are not compulsory and staff teaching on the PGcert course tend not to attend due to the heavy demands of the course/personal research projects. Sessions are repeated during the year but the course timetable is not sympathetic to the CPD run by the wider university. It is sometimes possible for some of the support staff to attend and use the knowledge and skills gained to assist teaching staff in their own use of the LP. Tutors are, however, proficient in their use of the LP in many ways technically. Usually this has occurred through ad hoc self-taught learning and learning through the support of the technical assistants within the department in an informal manner. It is possible therefore that the LP is not being used to its full advantage. There is a reliance on the LP for dissemination of information rather than for teaching. It is used, however, to audit subject knowledge in the science section, where students are given feedback on their answers via an automated system. It is also used in the construction of knowledge by trainees via the discussion forum. There is still a huge emphasis on using the LP as a replacement for paper-disseminated information and not so much as a teaching tool on the course.

CPD and training for staff via the learning platform

A new resource is now available for those unable to attend face-to-face u-Link training or for those wishing to consolidate their knowledge of u-Link. This section currently presents a series of introductory tutorials providing an overview of setting up a basic u-Link section. The university plans to expand this resource in the future to deliver a wide range of online training resources.

Training resources are also available via the learning platform, with a series of single page support resources and tutorials for staff.

Affordances and barriers

This section describes how the trainees on a primary ITT course at this London HEI responded to a discussion forum within a wider learning platform.

The data was obtained from a one-year case study that involved 168 postgraduate trainees in West London, all studying for the Post Graduate Certificate in Education (PGCE). The 2006/07 PGCE course had been designed to enable them to meet the Professional Standards for the Award of Qualified Teacher Status. As part of the course all trainees attend and complete the coursework for a General Professional Studies (GPS) module.

The main aims of this module are to enable trainee teachers to develop a critical understanding of the relevant theories and current research regarding educational practices in school, to gain understanding of and critical insights into teaching and organisational strategies and how to employ these in order to develop effective learning, to develop trainees as reflective professionals through analysis and evaluation of their own learning and developing professional skills and finally undertake high-level critical reflection on chosen aspects of learning and teaching. These aims are met through weekly university taught sessions between block school experiences, comprising lectures, seminars and practical group work. Trainees also compile a written profile of professional development, in which they reflect upon their own teaching and learning in relation to the Professional Standards for the award of Qualified Teacher Status (DfES, 2007). They are expected to access the GPS web-base, which has an operational discussion forum which trainees are invited to contribute to.

Trainees also have access to a web-base specifically designed to support their learning through the access to supplementary reading materials including curriculum guidance, relevant research papers and appropriate web-links. The web-base is also used as a noticeboard and area to disseminate general information regarding the course and a group online discussion board where every trainee was able to post their own comments and reply to those of others. This particular web-base was recently commended by Ofsted (2007) who commented that web-based materials and resources are of high quality and are essential to trainees' research.

Trainees have been instructed to use the discussion board as they see necessary, no formal instruction is given but some guidance offered as to examples of appropriate comments and ways of using it effectively. Trainees understood that there would be no formal input by course tutors but that tutors would regularly access and read comments, offering feedback during university taught sessions as appropriate. Data in this study shows that of the 217 comments posted, these were read 13,429 times in total.

These were some of the affordances:

1) Trainees could select from a range of information sources

The discussion forum and the web-base offered trainees a wider range of resources than traditional education settings such as classrooms. In terms of the discussion,

topics can be selected by individuals to participate in either by contributing or merely reading other's contributions. Interviewees' comments included:

S2 '... discussions ... were really interesting and although I didn't always say anything myself I found it really useful to read what others thought.' (21/04/08)
S1 'I found there was too much on there, some people wrote loads, I just opened the discussions that I thought would be useful to me. There was one time when I was writing my science SEN (special educational needs) assignment and 'Anne' had suggested a really good website which was so useful. I did write back and say thanks and suggested one to her which I'd also found.' (21/04/08)

The interview data suggests that some individuals like to work in this way and this allows a new learning style to emerge, that of learning based on collaboratively seeking, sieving and synthesising discussion comments rather than individually locating and absorbing information from a single source.

2) The users follow a broadly socially constructivist approach to learning

There has long interest in the use of communal groups as effective learning contexts in classrooms. The online discussion areas enable a communal constructivism where teachers and trainee teachers are not simply engaged in developing their own information but are actively involved in creating knowledge that will benefit other trainee teachers and teachers. The idea is that courses of learning are deliberately structured so that the work of any one group is developed and retained in such a way as to be easily available to other groups. Subsequent groups are not simply advised but are *required* to build upon this work. Their efforts, too, can be stored and so the process continues.

Again, trainee interviewees revealed this to be the case:

S5 'I learnt a lot from taking part in the discussion part of web-CT, it helped clarify things for me as I was able to ask questions and I knew there were a couple of hundred people out there who might answer my questions.'
(22/04/08)

S3 'I found it really good, because after lectures I often had questions triggered by what the lecturer had been talking about, I could then go on web-CT whilst it was all still fresh in my mind and throw a question out there..... I got all sorts of answers and sometimes they really varied so were interesting to me.' (21/04/08)

The interviewees seemed to appreciate this aspect of the discussion forum and referred to the final task they were asked to carry out on the PGCE course in relation to this active construction of knowledge which is of benefit for their peers as well as future ITT trainees.

S5 'One thing I really liked about it (the discussion forum) was when you asked us to upload our best lesson plan with our own formative comments about what went well and what needed to be improved. I could see why this was asked for, I ended up with a load of lesson plans each one with an

evaluation, I think that's a great idea and I liked the idea that people on next year's course would be able to use them. I think that will help them a lot actually.' (22/04/08)

From the analysis carried out it has become evident from trainee comments that this communal constructivist approach to learning has become prominent amongst those partaking in web-based discussions. It also is evident that the trainees are aware of the importance of knowledge construction within education, although it was not clear whether this was as result of the modelling which occurred through the use of the discussion forum.

3) The feelings associated with group belonging

Other reasons given for positive perceptions of the discussion forum were that it leads to an enhanced sense of 'group' which fosters feelings of support amongst individuals. These feelings can be particularly beneficial on a professional course such as ITT where highly stressful demands are made upon trainees as they enter the unknown territory of the school environment. Course designers can therefore use this information to further strengthen this supportive characteristic of e-learning by encouraging further group collaboration through, for example, the setting of tasks.

S5 'what I really liked was that even when I was on my own not on campus I could still talk to other people on my course – it sort of made you feel not on your own.' (22/04/08)

S2 'I felt like part of a group which was all going through the same thing, I know we were part of a tutor group but we weren't always together and really I didn't get to know my tutor group, there just wasn't time, it all went so fast.' (21/04/08)

However, there were also barriers:

1) External factors

Trainee interviewees showed that their motivation for participating in web-based discussion was linked to external factors and did not remain constant throughout the course.

S1 'I found that there were times when I used it more than others, I got really into it at the start of the course but as we had more and more to do and things got more stressful I must admit I didn't get round to using it much then'. (21/04/08)

S2 'I think I used it more when we were on campus not when I was in school. When I was in school I was so busy I didn't have any time to do anything apart from lesson plans and the rest of the paperwork I had to do to keep my files up to date, it was a nightmare!' (21/04/08)

S6 'I used it more when we had things to hand in, if we had a deadline coming up I did use it to see if anyone had written anything useful to help' (22/04/08)

2) Absence of task-focused activities

The interview data showed that some of the trainees would have liked to have been given directed tasks to carry out via the discussion forum. In the present study any tasks which have occurred have been instigated by the trainee teachers themselves and therefore on an ad hoc basis.

S6 'I enjoyed using the chat room but sometimes I think it would have been better if we had to talk about something....well... specific really, given to us by the lecturers, I think we could have got more out of it that way'. (22/04/08)

Some disadvantages of group work are that - in certain circumstances - the collective knowledge constructed by the group itself can be lost or, at the very least, degraded. It is common in many teaching situations that the intended product of group activity is to enhance the learning of the individuals who are involved and, while individuals may prosper, it is the collective knowledge-in-action that can disappear.

3) Lack of quality control

Some trainees were sceptical of the reliability of information gained from other participants in the discussion:

S3 'The problem with it is, is that sometimes people say stuff on webCT which isn't correct, there was an issue about hand in dates and someone said one date which turned out to be wrong. It needs policing!' (21/04/08)

4) Software limitation in the discussion forum

Limitations of the software available meant that the trainees could not save responses as a draft if interrupted in the middle of writing a post. As Wenger (2005) explains, an individual's participation in a community is rarely their main occupation. As the trainees interviewed explain, time became a constraint on their participation due to the heavy demands of an ITT course, therefore interruptions occur frequently. A feature that allowed the trainees to save drafts could have increased participation. More sophisticated software which has evolved since the use of the web-base in this study, allows responses to be classified with labels.

5) Learning styles associated with the LP

The discussion forum did not accommodate all trainees in terms of their preferred learning style. The main finding from this analysis of web-based discussion data is that only a small number of trainees used the forum for resolving or learning about professional issues. Therefore others must therefore have been resolving and learning about professional issues elsewhere. Their preferred e-learning style was not accommodated by the discussion forum format. Data is not available yet as to whether the wider LP accommodates for all learning styles. It can therefore be questioned whether the use of the LP itself creates a barrier to learning for some individuals.

Analysis of the trainees' discussions online showed that it could be divided into four categories, shown below:

Table 2 Categories of use: how trainees are engaging with the learning platform

Category	Characteristics
1. Communal engagement in construction of knowledge concerning professional issues within the programme	Trainee teachers who bring forward issues from their school-based experiences, seeking group solutions, advice on behaviour or the teaching of particular topics or specific learning issues, proposing ideas about what might be done, working through professional matters. This group exhibits the characteristics of communal constructivist learning theory.
2. Organisational engagement in instrumental and strategic issues within the programme	Not professionally-orientated but directed to complete task requirements, using the on-line classroom for course-related matters but not for 'professional problem solving' and knowledge construction, for example, for university-based assessment issues or tutors, course details etc.
3. Social engagement in social discourse	A low problem-based user of the online classroom, not used for professional matters at all but for other group, social, personal uses
4. Low-engagement users	Engages through reading but not initiating or responding to discussion

All trainee teachers (100%) accessed the programme's website at some point during the course, the majority making use of the site a few hundred times over the period of the programme, averaging hits once or twice a day. The highest number by one trainee teacher registered 1,424 'hits': it is unclear why this person needed to access the site so often. The distribution is shown below.

Table: 3 Percentage of trainees accessing the learning platform

Number of occasions	% of trainee teachers
< 100	6
100 – 200	26
200 – 300	26
300 – 400	13
400 – 500	10
500 – 600	10
> 600	8
>1000 (1424)	1
	100 (n =154)

Table 4 gives the full break down, categories 1 and 2 showing the 'non- discussants' who entered the website but not the discussion board element, and the 'low engagers' who entered and read the discussions but did not respond. It is clear from this table that this is the largest number of trainee teachers, those who engage

passively with the group discussion. That is, they open discussion items posted by others and read these but then do not feel the need to contribute further by responding or posting an item of their own. This phenomena has been reported elsewhere in similar circumstances (Pedrosa *et al.*, 2005): those who receive but do not contribute to ongoing discussions, the passive-engagers with the system.

In the third category are a small number of trainee teachers who use the discussion board for social exchanges, but this is rare in the context of the overall discussions posted. In the fourth category lie those trainee teachers who exchange information, discussion about the mechanics of the programme, whether it is the school-based element, when they are not in attendance at the university campus, but separated and working in primary schools in the local region. Finally, in the fifth category lie those trainee teachers who use the discussion board to raise professional issues, trainee teachers who raise issues from their school-based experiences, seeking group response, advice on behaviour or the teaching of particular topics or specific learning issues, proposing ideas about what might be done, working through professional issues.

Table: 4 Typology of user and reasons for accessing the LP discussion forum

Category	Criteria	Percentage of trainee teachers (n=154)
1. Non-discussants	Access the site (possibly to read lecture notes, presentations etc.) but not the discussion board engagement	16% (24)
2. Passive engagement (shows 'reading' response)	Read the ongoing correspondence without initiating discussion or posting responses	51% (79)
3. Social engagement in social discourse	Initiate and respond to non programme-based practical questions (e.g. parking). Initiates and responds to issues of social organisation	3% (4)
4. Organisational engagement in instrumental and strategic issues within the programme	Initiate and respond to school experience-based anecdotal discussion. Initiate and respond to university-based anecdotal discussion. Raise and respond to questions about university-based practical course issues (e.g. deadlines/course requirements)	21% (33)
5. Communal engagement in professional issues within the programme	Initiate and respond to real problems from school-based experience (e.g. behaviour/teaching specific topic). Initiate/seek and respond to advice on programme-orientated issues (e.g. reading/study buddies). Offer and respond to general advice concerning professional issues/ have found useful resource and offer to share this.	9% (14)

Annex 11: Case Study F – HEI East Midlands

HEI profile

HEI F is a large, diverse and vibrant modern university and has approximately 25,000 students of whom 7,500 are part-time. Undergraduates account for some 20,000 students and postgraduates for 5,000. Additionally, as at April 2008, HEI F had some 7,700 students on its collaborative register of which approximately 4,300 are studying overseas. A significant proportion of their income is non-HEFCE generated and there is a broad and distinctive range of non-standard programmes including professional and in-company schemes. HEI F has approximately 2,293 FTE staff of whom 968 are academic.

Context and usage

HEI F has invested in a new LP, which was piloted 2007–08 and implemented across the university in 2008–09. A consultative group with representatives from all Schools led the initiative, supported by a team of educational learning support developers within the Education Development Unit. The process of making the choice was very open. A list of requirements was initially drawn up and shared across a steering group, which had representatives from each School and support staff such as Library Learning and Resources (LLR). LP companies were invited to bid for the contract and two were selected for trialling and all staff across the university were invited to use the systems and give their preference. From this the final choice was made: Desire2Learn.

In 2008–2009 there was a great deal of training for all staff both within Schools and across the university and a number of pilots were led by academics. The Education Development Unit worked closely with the IT Service team to ensure that all elements of the system were tested. By September 2009 all module leaders were expected to move their materials from the 'old' LP into the new LP. The new LP offers increased opportunities for blended and e-learning and integrates Web 2.0 technologies. They are in the early stages of still getting used to the new system, so not all staff are exploring the new tools,. It is mainly used at the moment for dissemination of documents and online discussions but there is a clear steer from management to move to blended learning. A great deal of compliance testing has been carried out to ensure a smooth transition to the new system.

Although still a new system there are examples of good practice which were showcased in January 2009 through a 'Fusion Conference' at which the Chief Executive of Desire2Learn and his team were present. Examples of good practice include the use of web logs to support students on placement, an increasing number of e-learning modules, greater use of the discussion facility which in some areas is replacing some face-to-face seminars, and use of the new e-portfolio tool (currently being piloted by a range of Schools). There is going to be an area of the web where staff can look at examples of good practice with a range of tools. Within the EDU team a member is allocated to each School. This team is very helpful in spreading good practice and has recently started up a monthly newsletter to ensure sharing across Schools. Also the Learning and Teaching Co-ordinators' (LTC) Network, with an LTC in each school, is very active in sharing good practice and regularly meets

with members of the EDU to discuss new developments and case studies relating to learning and teaching.

CPD and training for staff on the use of the learning platform

New jobs have been created to support the LP at university level. An e-learning help desk has been set up to deal with technical problems and give advice. A member of staff has been appointed on a temporary basis to oversee the training required by staff and to ensure a smooth transition from the old LP to the new LP.

The new LP offers opportunities for academic staff to rethink their pedagogy and teach in different ways. At the moment it is difficult to gauge how successful this will be but the level of support centrally, from the Learning and Teaching Co-ordinators and from EDU should help to develop this further. There are 'Champions' identified in Schools who will provide support to staff wanting to change the way they teach and make greater use of blended or e-learning. Alongside the training that was available to all staff has been an opportunity to rethink pedagogy, and this has been very much encouraged in training sessions. Support from EDU is available on an individual or programme team basis – again to encourage academic staff to make greater use of the new tools and rethink pedagogy. Opportunity has therefore been available in a formal and structured way, but is also available more informally.

There is access to a range of staff development text based, e-learning and video clip materials covering most aspects of the LP. During the pilot stage there was a great deal of training available, both across the university and within Schools. This has continued this year with CPD events regularly being circulated.

CPD and training for staff *via* the learning platform

Using the new LP has resulted in staff rethinking the pedagogy of LPs and in so doing this has resulted in a greater sharing of the pedagogy with teacher trainees.

In addition to the new cross-university LP they have been using Moodle with trainee teachers on the PGCE secondary course with a view to cascading this across their primary and possibly GTP trainees. This began with a small project with the PGCE ICT students three years ago and proved to be so successful both for the trainees and their schools that they put in a successful bid for funding for additional server space and IT Service support. This means that each of their trainees can be given their own Moodle area to use during their teaching. As it is managed by HEI F, it is available to them in both school placements and is backed up/updated etc. for them. The trainees get a URL address and a password, sufficient space for both teaching experiences, plus training from a mentor. As it has become simpler to manage and the server space is protected, they have now built using the LP in teaching into their first assignment – which was praised by the external examiner.

Staff thinking about pedagogy through the LP is mainly unstructured and informal although they have had some formal sessions where they discussed, as a team, how they should be using the LP with the trainee teachers. There is a Policy document (at School level) of what the Minimum Usage of the LP should be – this includes the use of reading lists, registers, what information each module should contain such as attendance policy and handbooks, etc. This in turn has been good to share with the

trainee teachers so they can consider formalising content when they take up full-time posts.

In terms of the Moodle LP for the trainee students, some of the tutors had already used it in teaching before coming to HEI F, so they were able to cascade to other staff and run workshops, so there are staff at both ends of the continuum, from some are self-learners who pick up what they need when they need it without formal training, to those who have attended workshops, or use the online training that's available.

Affordances and barriers

As the LP was new this year, tutors simply migrated their materials across from the old LP areas without considering what the new LP could do, or rethinking pedagogy. Some of the postgraduate trainees weren't impressed with this – particularly those that had seen better use within their undergraduate programmes. One of the strand leaders worked with a small group of students to develop the way the LP was used so that it met their needs more closely. The students on this strand find it much more useful now and are much happier with the LP. This is currently being disseminated across the different subject areas on the ITE programmes.

A main barrier has been the newness of the LP to staff and the abundance of new tools – the students are keen to use the tools, but staff have not yet been trained in using all of them.

Another barrier has been about managing student expectations. For example, one strand leader puts materials for half-term seminars into a blended learning format so the students can have a break from university over half term and experience blended learning materials and consider the pedagogy for their teaching, but not miss out on studies. This has worked very well in this particular tutor's area, but the students now want more of this, which takes considerable time, and there are also students who feel they have paid to have a tutor in front of them so they do not want blended learning.

The affordances of the Moodle area for trainees are that tutors give them their Moodle area to use, train them in how to use it in teaching, and maintain it for them in terms of back-ups and updates. The barrier can be that their school placement may not want them to use Moodle, or they may have their own LP that they want the trainees to use – in which case they provide training in the skills, but the trainees are unable to use the pedagogy they've learnt at university.

There are many affordances with the new LP – the tools that come with it are plentiful and are being tested centrally by a team of academic staff before they are rolled out. Staff are at different stages with the new LP and different staff are finding use for a different range of tools. So far the tools used commonly are discussions, blogs, online registers etc. One group is piloting the e-portfolio tool, although this isn't proving too successful for the trainee teachers so they are considering moving to a Moodle-based e-portfolio instead for these trainees.

The main difficulty for staff is how different the new LP is to the old LP. Many staff are digital immigrants and need something simple to use, so the lack of familiarity with features such as 'drag and drop' has proved an inhibitor for some colleagues. However, overall it is proving to be a good development. The sheer amount of staff training available has been the main affordance – it's been offered in Schools, across Colleges, by the Library and Learning Resources staff, by the central EDU team, and the Students' Union have also offered sessions for students. Staff can have 1:1 training, join a group of colleagues, or use the e-learning materials. The university thought carefully about supporting staff and piloted it carefully with academic staff and student groups before rolling it out. As each tool becomes available, staff can feel confident that it's been tested.

In terms of Moodle there are no specific problems that have hindered the effective use of it by the trainees in their schools other than not being allowed to use it, and this doesn't often happen. Not all the trainees really exploit the use of it, some only using it to pass their assignment, but those who do use it in teaching are generally the first to get jobs.

Annex 12: Case Study G – Secondary school 1

School profile

School H is an 11 to 16 comprehensive school and has had a learning platform since 2002 when they piloted one in order to explore virtual learning environments. Looking around for a commercial provider, the school selected one in 2003. School H provides a unique opportunity to look at LP use. The school was burnt to the ground in 2004 and the school decided to move to a third learning platform in July 2008, as that was the platform recommended by and used across the local authority. The new platform was implemented in preparation for the move to the new buildings in February 2009.

Departments interested in using the LP were invited to pilot it. The teacher volunteers included some with previous experience of the second learning platform. The departments that used the LP did so innovatively and involved the students heavily in the design of the department areas, which encouraged use of the platform. The school then trained ten Year 10 students (rather than staff) to use the new learning platform and then used those students to support and to help train teachers and support staff.

All the students in the school were given an extended two-week, term break while the school moved into the new buildings. During this extended break, all learning was to be done remotely via the learning platform. Time was taken to ensure that all students had access; this included sessions being arranged in local libraries for approximately 7 per cent of the school population, with volunteer staff to support and monitor those students. The school also made a workbook available to 30 per cent of the students who expressed that preference. There was a whole-school initiative to provide resources, which would be adapted for use via the learning platform, for the students' use during that break.

Context and usage

Six departments took up the initial challenge to develop use of the new LP: PE, History, DT, IT, French and Science. The teachers in the PE department, together with students, designed their own departmental area on the platform, including forums and a calendar. The history department, over a five-week period, used the platform for the delivery of a unit of coursework to Year 10 students. Design Technology used forums to discuss and evaluate student designs. The IT department decided on a more thoroughly integrated approach and used the platform for teaching and learning through online lessons. The science department piloted the use of assessment tools for KS4 by setting up question and answer resources for GCSE students. The French department initiated an aural project, with the French *assistant* recording and uploading a variety of passages. The students would listen, record themselves and compare the two recordings.

The school reported that students using the LP to learn in one subject would take ideas into lessons in other subjects. For example, the English department developed their area of the LP as a result of hearing about how students used the platform in other departmental areas.

Ex-students were formally trained in e-moderation and used to monitor a Year 10 social education forum. The Year 10 students knew their e-moderators and so were more comfortable discussing various topics than they might have been with a teacher moderating. The module was very successful in terms of the use of the forum for online learning.

The Year 10 students, having been trained in the use of the platform, supported the teachers across all their lessons. Students and teachers worked together and pushed the use of the platform forward into other departments which then started to develop the LP for their curriculum areas too.

During the week of the school move, one student having difficulty with some science work booked a video conference with a non-science teacher at school. While parents hovered in the background, the conference started with 'social niceties' such as "How are you, Sir?" and then moved on to the difficulties yet interspersed with an occasional pleasantry. This had a positive outcome when back in school, as pleasantries continued to pass in the school corridors and playground, demonstrating an increase in trust and confidence in that teacher.

In order to move forward, the school continues with narrow targeting using small projects, which will then cascade through the school, increasing the use of the learning platform for teaching and learning.

CPD and training for staff on the use the learning platform

Initial formal structured training was given by the platform provider and undertaken by ten Year 10 students and a Network Assistant (NA) and the students were then used to support the teachers, both formally and informally.

A range of informal CPD methods have contributed to teachers and other members of staff learning about and subsequently using the learning platform:

- In the run-up to the school move, teachers were asked to give resources to the network assistant and the assistant head, who would adapt the resources and upload them onto the system. Some of these were simple worksheets. The teachers could then see how their resources had been adapted to make it appropriate for online learning.
- Using Year 10 students to learn and teach others about the learning platform increased students' confidence and skill level. The use of the LP to formally deliver a whole week of lessons immersed the students in its operation and they learned very quickly how to use it. The students' involvement in the design of some departmental areas ensured that the interface was such that students were attracted to the areas and also increased their skill level.
- The teachers were given formal, structured guidance in the use of the platform: such as using font Arial, 12 or 14 in the preparation of curriculum materials. This is based on advice from the learning support department and research that suggests that this is the most easily accessible font for most students. Where large amounts of text are used, these are accompanied by a voice recording of

the text. A forum is incorporated into every subject lesson, allowing students the opportunity to consult with others and seek advice and help. Standard graphics are used to represent file downloads, forum, wiki and navigation. These graphics are sourced from an online public domain library of education clipart. As far as possible, some form of pupil collaboration is built into each lesson, as is a list of recommended websites and a video resource. Where hyperlinks are used, these normally open up in a separate window. Colour is used to highlight keywords on each page. Lessons are designed in a range of formats to allow staff and students to explore designs that best met learning needs.

- Targeting innovative teachers and support staff within departments, together with the student support outlined earlier, facilitated the informal learning by the teachers and their subsequent uptake of the use of the platform. Continued narrow targeting of appropriate areas followed this up, empowering those early adopters of the LP. This practice then infiltrates the pedagogical consciousness of the teachers as they experience the success of those innovations first or second hand or through the students' feedback on the use of the platform.

CPD and training for staff via the learning platform

A CPD module, being managed through the facility to track learners' progress and achievement to completion, was set up on the learning platform for the teachers. An incentive was provided, in the form of £200 in funds that was given to the subject department, when each teacher completed the online course.

Affordances and barriers

The affordance of time and opportunity for the teaching and support staff to further their professional development has an impact in the use and development of the learning platform across the school. Teachers can formally book time with the LP-trained students or Network Assistants for the CPD they need, when they need it. This form of on-demand training has proved to be an effective model of CPD for the teachers; accessed as 'just-in-time' training, when the need arises.

The school thought it was important to consider 'what is the most appropriate way to use the learning platform in order to enhance teaching and learning?' A two-day, whole-staff training course on e-learning philosophies was set up, to enable teachers to create and use appropriate resources on the platform.

Annex 13: Case Study H – Secondary school 2

School profile

This school is an 11 to 16 high performing Specialist Technology College with approximately 850 students. It achieved 64.8 per cent A*-C grades, including Maths and English, last year. Four years ago the school became an RM school and worked with RM Connect, which had been successful, but together with a large curriculum change, the learning platform resources were no longer appropriate and could not be adapted, creating a barrier to the use of the platform.

The school is in the early stages of implementing the SIMS Learning Gateway platform for a three-year trial.

The school are looking for built-in online assessment, which feeds straight into the management information system (MIS) together with an online reporting system, which would track pupils, their work, behaviour (with a focus on the positive) in real time, in order to respond to and target any emerging patterns.

The school is currently working towards the 2010 targets for online reporting, 'Engaging Parents in Raising Achievement' (EPRA).

Context and usage

There is a school website which is managed locally, a series of electronic noticeboards around the school and a student home page, with links to information such as uniform lists, order forms and after-school clubs. The internet site contains links to the 'family of local schools' – the feeder primary schools.

From the school website there are links to learning websites. A maths teacher in the school has developed one of these (mathsduck.co.uk) and he has secure, restricted areas for students and staff to access. There are games and other resources, and access and results are monitored. The students engage well with this resource, playing quizzes and games. Although outside the learning platform, by the teacher's choice, the students' use of the site is tracked and recorded in the secure area.

The Modern Languages Department has online resources which the students access either from home or school, and return homework and completed class work to the students' or teacher's folder. The students are also building e-portfolios using Dreamweaver.

CPD and training for staff on the use the learning platform

The school has three IT technicians. These technicians receive formal, structured training from RM three times a year and gain certification of RM educational competence. The school has also bought into higher-level training for these technicians, who run a help desk to support teachers and students with any technical needs that may arise at any time in the school day.

There are two to three whole school days of formal, structured CPD training each year, which is provided by in-school specialists, or experts bought in. The training sessions are issue based, raised by the teachers. If there is something they want to

do, then training will be arranged. This ranges from formal training courses to informal peer support. For example, when online reporting was introduced, there was a whole day of formal, structured training to train the teachers in this. Training is specifically tailored to teachers' needs. This may slow down the implementation, but confidence is raised so that new technologies are inclusive and appropriately used when teachers take them up.

Formal training is available for IT technicians and any staff member who requests a specific course. Informal, peer-to-peer training will also occur during a formal training session and during the day-to-day life of the school, as teachers support each other. Again, access to the IT help desk also provides on-demand informal training.

Formal peer learning takes place regularly at meetings where members of staff showcase good practice with ICT, or are given time to enable other teachers to share practice in respect to their knowledge, skills and understanding and to build collaboration through learning with ICT. For example, the maths teacher is currently working with the science department to develop an online curriculum.

Pedagogical knowledge and understanding of technology such as the learning platform has grown through the teachers' professional understanding of how students learn, which over the years has underpinned the introduction of a variety of technological solutions. For example, the ILS Successmaker is widely used, as are many tools in the design technology area and across the school.

The combination of teachers' informal sharing and more formal showcasing of good practice, to disseminate knowledge and understanding, is found to be effective.

With respect to securing time for teacher's professional development, the school attempts to give a 'trade off' so that if something extra is 'expected', the staff will be released from another task to compensate.

CPD and training for staff via the learning platform

To date, this feature of the learning platform has not been developed.

Affordances and barriers

Teachers use the learning platform for directed tasks, such as online reporting, which then facilitates the learning of the necessary skills to use the platform more widely.

Where there is a change in the platform in use, the difficulty of adapting resources creates a barrier to the uptake of the new learning platform.

Concerns regarding the appropriate use of communication tools are a barrier to their adoption. The school intends to build up to the implementation of these tools by educating the staff and students. The expectation of student behaviour with respect to online communication is to be consistent with classroom expectations.

The teaching staff needed to understand the pedagogy which underpins the use of the learning platform in order to exploit it for teaching and learning. The platform will

then be used appropriately once teachers are convinced that they have purpose and meaning to teaching and learning. Teachers then require the skills they need to produce effective, high-quality online resources.

Annex 14: Case Study I – Secondary school 3

School profile

This school is a maintained 11–19 school situated on a 56-acre green-field site with almost 2000 students. A third phase Specialist Technology College, Microsoft Partner School and CISCO Academy, the school has received a range of awards for its innovative work. These include the CISCO Award for Innovative use of ICT and British Council International School Award in 2003. The school was an Enterprise Pathfinder and, in September 2004, designated as a Training School. The school has its own professional learning centre, is an Investor in People and, in 2003, received a Regional Training Award. More recently, the school has been established as a Specialist Schools and Academies Trust (SSAT) Research and Development hub, and received funding to develop extended services and hold Sportsmark and Artsmark accreditation.

Context and usage

As an ICT industry partnership school, the school has been using its learning platform for several years. They are hoping to find an off-the-peg product to replace this, which will enable them to create their own interactive resources for teaching and learning. The requirement is for SCORM-compliant online courses, with interactive learning resources, which would also collect and collate marks and provide feedback for students and teachers; this data should also be available alongside other data for reporting. (Sharable Content Object Reference Model (SCORM) is a collection of standards and specifications for web-based e-learning.)

The learning platform is used for email and instant messaging by all school staff (teachers, support staff and administrative staff) and students. Podium for Podcasting is used, which is intuitive software giving functionality with an easy-upload interface. Courses are then set up with podcasts as part of their delivery. Work associated with that aspect of the course is then available online, together with homework. This is completed and returned to the teacher for marking via the learning platform.

Learning content delivery software is also used by teachers to design their own resources. Modern Languages have converted old style tapes to audio files, which are accessed by the students across the learning platform. Homework is set, accessed and marked via the platform. However, teachers feel restricted because the results cannot be collated and used by the management information system for further reporting.

CPD and training for staff on the use the learning platform

Formal CPD was delivered to the whole school, by the assistant principal with responsibility for the implementation of the learning platform, on how to use the platform. Later, interested members of staff were invited to become e-champions for the LP. These champions have been given more formal and informal training through a series of meetings, which include developing and uploading a variety of resources. The e-champions will then cascade their training through formal departmental meetings and informal peer support instigating an organic distribution of knowledge, skills and understanding throughout the staff.

CPD and training for staff via the learning platform

The initial formal training session on how to use the learning platform, delivered to the whole staff, was followed up by an online course delivered via the platform itself, which all teachers were directed to undertake. The online course included podcasts and files for information and a series of tasks for the teachers to complete. The teachers were logged onto the system and the online course was tracked and monitored, with reminders sent via email to those who did not complete the online training course.

Affordances and barriers

The availability of online training resources, email and instant messaging for the teachers and the students to use has greatly facilitated the advanced use of the learning platform.

However, teachers reported that the unintuitive interface is a huge barrier. Even file access is clumsy and cumbersome and totally counterintuitive. The interface needs to stimulate the imagination and further creativity. Interactive interfaces are now being designed to engage the user and make file access simpler. These software developments will make the learning platform more user friendly and accessible, which, it is hoped, will increase its use.

The insistence by the senior leadership team that the whole-school training course had to be completed by all teachers and within a given time frame, together with monitoring which is facilitated by the online tracking system, ensured that the teachers did complete their training – and used the learning platform to do so.

The inability, so far, to be able to design good quality, SCORM-compliant interactive resources, which are pedagogically sound, is a huge barrier to those teachers who wish to move forward in using the learning platform.

Interoperability with the management information system (MIS) is not yet available. This is a barrier since any managed aspect needs to feed back into the system if it is to become a total learning platform and this is what the school requires.

Learning platforms are, by their nature, restricted areas. A shared area, where schools can share resources and ideas with other schools, would facilitate an increased use of learning platforms.

Annex 15: Case Study J – Middle school 1

School profile

This is a voluntary controlled middle school serving 560 pupils at Key Stages 2 and 3 (Years 5 to 8, ages 8 to 13). There is a five-form entry with six forms in the current Year 6.

The school is using a learning platform that was recommended by and used across the local authority. The platform was introduced to teachers and support staff mid-summer in 2008. Pupils were introduced to it in Autumn 2008.

Context and usage

The learning platform is widely used across the school in a variety of ways. This is mainly due to the availability of seven teachers across the LA, each of whom has one day each week to work on the learning platform in schools.

The use of the platform has been established with teachers by its use for daily messages and other communications between teachers, with pupils and the Senior Leadership Team. They are also encouraged through competitions, chat-rooms and forums which have been set up; these are also available to pupils outside lesson time. Everyone – teachers, support staff and pupils – responded to the introduction of virtual pets on the learning platform, including a request for a ferret as one of the teacher's children keeps these as pets.

Each class has its own area, which contains many pages for that class. There are many other areas including a library page, sports pages (including fixtures, results and photos), a school council page and also, requested and developed by the pupils, House areas, which include the presentation of House awards. There is also a virtual touch typing club.

Some areas are subject *or* year specific, whilst others are subject *and* year specific, such as Year 8 English. E-Learning Folios (eLFs) have been created which contain trackable links and allow work to be submitted electronically. ELF's are used for spellings, mainly in Years 5 and 8. Spelling lists are posted with links to electronic games, which have been specially designed by the teacher for pupils to help them to practise the spellings. The teacher can monitor who has used any eLF and the resources linked within it. This tracking enables guidance to be given to students experiencing difficulty and encouragement to use the eLF for improvement. One Year 8 English project involved designing Shakespeare's Bebo page. Links were made available to access appropriate sites. One disaffected girl offered a 'pinky promise' (linking little fingers with the teacher) to the teacher, that she would get all her homework in on time for this project, and she did. The work was high quality and had the positive outcome that other pupils asked her how to do things that she had done. A marked improvement was noted in other pupils' attitude to her and, consequently, to her self-esteem and confidence. Another homework was set for pupils to retell a Shakespeare story through cartoon strips using GoAnimate. This was set last lesson on Monday. By 5.30 that evening, three boys, not usually known for their prompt homework, had sent in their cartoon strips. One was a lovely version of *Hamlet*.

For Year 5 history, hyperlinks to appropriate web sites are updated according to the current topic. Within these areas there is a variety of resources, including pupils' work, podcasts and slide shows. There are also links to useful websites. Flash games are embedded and links provided to free and low cost tools for the learning platform. There is a discussion board and chat rooms that can be used outside lessons. Word games and discussion forums with targeted questions are also used. In music, work is recorded so that other pupils can replay it and feed back on their own and other pupils' music

There is a lunchtime access club for pupils who don't have home access (about 10 per cent).

Comments from Year 8 pupils include:

"The learning platform is very helpful with the issue of getting homework done."

"I use the learning platform for checking my messages and playing games and discussing some things. Also I use it for helping me with my homework and I use the calendar to keep track of days and write events down. I use the eLFs for homework and in lessons and I also use the learning platform for keeping in touch with friends."

"I use the learning platform to look at and send homework, to edit the House page. I use it in classes. I use it to e-mail anything to teachers, to see the pictures and properties on the pages, to check e-mails, so I know what we're doing during extra curriculum activities and Arts Week and to learn different things. I also use it to show people outside school my work, what we're learning and things we do during arts week."

CPD and training for staff on the use the learning platform

The commercial LP provider had specialist trainers who were bought in for formal whole-staff training on how to use the learning platform, such as how to set up class areas for pupils to access.

A learning platform consultant (a serving teacher), is available for one day a week (paid for by the local authority) to help and support other teachers and support staff by providing formal training and informal support where required. This expert teacher is also an innovator in the school and other teachers can see and use her resources. She does 'just in time' support, pitched at the teacher in question, mentoring one or two teachers at a time. Sometimes members of staff ask her informally for help and support which she also gives. Teachers report that this has proved to be an effective model of CPD for LP use.

The expert teacher said "'How to...' training is what is required for most teachers in order to raise their skill level and, hence, their confidence. Some need more time and support than others."

The teachers have the underlying pedagogy; what they need is the skills to facilitate using the learning platform to support the pedagogy. Teachers observe the motivational effect that using the platform has on pupils, engaging pupils with the huge wealth of resources that are available.

Formal, structured training is provided on the introduction of the Learning Platform, followed up with informal, structured support.

Students are driving the pedagogy, making suggestions in lessons as to how the platform might be used. Resources and ideas are shared across the LA and also through the learning platform provider. For example, the idea of using a stat counter, which encouraged pupils to access pages, was then disseminated through the provider to other schools using that provider.

CPD and training for staff via the learning platform

There is an informal discussion forum on the platform about its use.

Affordances and barriers

There are many factors facilitating the effective use of the learning platform: getting the pupils involved in the platform and changing resources and pages – updating areas regularly keeps the pupils interested. Competitions, online voting, website of the week, and free online tools all ensure that everyone wants to get onto the platform to see what has changed, as does taking 10 minutes at the beginning of a lesson to look at the platform and highlighting the changes. Students also put pressure on teachers to use the learning platform.

The LP consultant, a full time teacher at the school with one day a week set aside, and paid for by the Local Authority to champion the Learning Platform and its use, has done a great deal of the development work. This is seen as a key affordance, facilitating the effective use of the platform across the school.

All teachers have their own school laptop and can create content for the platform, and take responsibility for managing their 'Classes / Shared areas'.

The decision from the Senior Leadership Team, to conduct core business communications via the learning platform, has ensured that teachers have had to use it. This has created a change in the working culture of the school; teachers have to log on in order to get the daily messages, and an increase in the use of email for communication, together with an area for social occasions, continues to ensure that teachers have had to adopt the learning platform in their daily working practices.

Seeing the validity of the LP's use through support, web links and competitions, encourages the teachers to move forward in their use of the platform. Celebration of success through feedback from the local authority, the school improvement officer and the LP provider to the school, has had an impact. The head teacher now also shows more interest in and respect for the use of the learning platform.

Some barriers remain: the lack of integration with the management information system (MIS), which lacks an online mark book, is a barrier to the use of data from the learning platform.

There are still connectivity and reliability issues which affect teacher confidence in the learning platform.

The school is using the pupils' responses, successes, availability and necessity to overcome any resistance to change.

Annex 16: Case Study K – Middle school 2

School profile

This middle school caters for approximately 550 pupils in Key Stages 2 and 3, aged from 8 to 13 years. Ofsted found in 2008 that the school performed at an average level in English and science but below average in maths. A new head teacher started at the school in September 2008.

The school chose a learning platform that was recommended by the local authority. There is a 3-year contract with the commercial provider. A team of programmers are still setting up the platform, which was implemented in November 2008.

Context and usage

The school is taking part in a national trial of a parent portal to enable parents to access a specific area of the learning platform and will have a connection to the school LPs across the authority. Parents will only see those areas that have been uploaded to the parents' area. There will be no access to the actual school learning platform. Parents will use one log-in to see information about any of their children who are in schools within the LA with one username and password. This is due for implementation in June 2009.

The managed information system remains limited to the school and that data is not shared. Below that, the class teacher decides what is shown. There is a flag system which the teacher uses to control what may be seen and by whom.

On the learning platform, email and other communication tools are widely used, as are forums and shared areas. The ICT coordinator asked everyone to email his or her birthday date to make a calendar, which included a birthday reminder. Learning resources are made available to pupils.

The platform is used as communication tool between teachers and information from the LA is disseminated this way. Feedback about the platform itself, good or bad, is fed back to schools and also to the LP provider.

There is capacity to use the platform for mentoring and coaching. The intention is to move forward with this.

Pupils had specific ICT lessons to introduce the LP and the skills they needed to use it. Some pupils set up quizzes in the form of 'Who wants to be a millionaire?' as a science-based consolidation exercise for elements, mixtures and compounds. The pupils then played each other's quizzes and evaluated them. Many went to considerable trouble to set up the quizzes to be as much like the TV game as they could. Others set them up as interactive games using PowerPoint. Some pupils tried Moviemaker but it was not successful for this task. There was also a 'history of the periodic table' project set by the science department, which also covered history, social history and geography (looking at the way that scientific knowledge was accepted and disseminated in late 19-century Russia). The learning platform was used to set up appropriate links and to present the completed project. This was an effective use of the platform to bring a wide area of knowledge to a science project.

A key facility is the ability to create accessible KS2 SATs revision pages for science. Images link to science revision games.

In ICT lessons, forums are used regularly for discussion. The teacher sets up forums with a discussion topic and then enables pupils' access. Pupils have also used discussion forums to give feedback about how good projects are and discuss ideas for social enterprise projects. They discussed a viable project for Christmas cards and stalls. They log in from home and upload videos for evaluation. One pupil had an idea at home and emailed the teacher who happened to be online at the time and so received an immediate response. A poignant moment was a video evaluation of the Christmas card project. Work from 11- and 12-year-old pupils was uploaded onto the learning platform and evaluated by their peers. There was some preparation in terms of scaffolding to support the structure of their evaluation, but it was not prescriptive. In terms of the confidence of the children through their reflective practice and development of articulation of answers, this was highly effective.

In the French department, ideas have been exchanged with a French school. They communicated by web camera, using language skills to communicate verbally. Over the time that the platform has been in use, the department has increased the number of files available on the Learning Platform from 1 or 2 to over 50.

The school is just at the stage where pupils are searching their own class area and are becoming confident to be able to submit work from home. Pupils ask questions and receive answers by email. If a pupil is off sick, they can still access their class area where there are lesson plans available: one pupil, a Traveller, has been in Australia. He has a laptop provided by the local authority and accesses lessons on the learning platform in this way.

CPD and training for staff on the use the learning platform

There was a whole-school two-phase formal presentation by the commercial Learning Platform provider. The first phase was a formal presentation and demonstration. During the second phase, teachers had the opportunity to log on and try the platform with formal instruction and informal support. There have since been secondary and tertiary less formal workshops.

The local authority has organised formal twilight sessions but only one or two keen members of staff have taken them up. There is a consultant for students and young people who works for the LA. She is available to come in and guide members of staff through setting up their area of the learning platform, using either a formal unstructured and / or informal approach according to the task at hand. There is good formal CPD and training provision if it is sought, but it is not well taken up at present. The pupils are also a source of training – both staff members and pupils can ask a pupil who goes to the ICT club or Junior Area Network Advisors, who have responsibilities mainly for the movement and control of equipment but also have specialist skills, which can support teachers and pupils' learning on use of the platform.

Teachers use their pedagogical knowledge to adapt resources for the platform. It is mainly seen as facilitating opportunities for pupils to research, expanding learning areas, providing links for learning, breadth of knowledge and cross-curricular links as well as promoting self-reflection. The platform is also seen as a good opportunity to consolidate knowledge and develop new ways of thinking.

Teachers are encouraged to explore and to request help through formal training or informal support from the LA and School Leadership Team.

Affordances and barriers

The support of the student consultant (in their Learning Platform support role), as well as the innovative teachers working with teachers at an informal peer level, has been effective in raising teachers' confidence in using the learning platform. When teachers have the time to 'play' with the system and the encouragement to do so, they find they are more likely to use it. This system, however, has only been up and running for five months, with some parts still being set up. The availability of technical support is crucial.

Teachers report that the platform is not easily navigable and can be frustrating. The management information system (MIS) is not yet visible to teachers, which is a barrier to the integration of the system.

Lack of time for teachers to learn collaboratively is a barrier. Teachers need time to learn and investigate how the platform can best be used for teaching and learning. Where teachers are overworked and can't see the advantages, they are less likely to move forward. Once the innovative teachers and early adopters themselves feel fully confident and the LP is fully up and running, they will encourage other teachers more assertively to take up the free training offered by the local authority.

Annex 17: Case Study L – Infant school 3

School profile

This school is an infant school serving pupils aged 3 years to 8 years in the Early Years Foundation Stage and Key Stage 1. The school is situated in a deprived coastal area; out of the 230 pupils, between 25 and 35 per cent receive free school meals.

There are eight classes in the infant school, with a high proportion of young parents as there is a high teenage pregnancy rate locally. At Key Stage 2, pupils move to a local junior school, with whom the infants' school collaborates closely, sharing their strengths.

Ofsted in 2007 found the school L to be 'a good school with some outstanding features'. The academic achievement was said to 'represent good, and sometimes outstanding achievement based on their starting points'. The school is also part of the local authority e-learning foundation, which enables pupils to take laptops home.

Context and usage

The head teacher was involved in the LA's selection process for the learning platform. Following a long process of investigation of the list of ten provided by Becta, a learning platform was chosen largely due to the support package which was offered alongside it. Almost all the other schools in the LA decided to accept the recommendation, and this has been very useful for collaboration between schools.

The school was set up as one of a few learning platform 'early adopter' schools. These early adopter schools ranged across the key stages; this has been useful for the credibility of the platform and collaboration between schools. The LP was implemented at Easter 2008.

The starting point for the school was the question 'How can we use the Learning Platform to raise standards and help to make our learning more effective?' This has remained a fundamental principle throughout the implementation.

The initial approach was to address the number one priority in the school improvement plan – to increase the engagement of parents in their children's learning. To that end, they set up parental secure area with log-in immediately. The parents' area has forums where they can ask questions and the school can also consult with them and share policy. As this is a secure area, 100 per cent of parents have given permission for photos and videos to be visible. This means that parents can see their children in the process of learning and also, by sharing this within the family, they have a starting point for discussion with the children about their learning. For example, class assemblies are videoed and uploaded, as are photos from class work and extended school clubs which run from 7.30am and until 6pm.

As some families still have internet access difficulties, a training room was set up in school so that parents could come in to access the learning platform with support alongside the children. This highlighted some parents' lack of skills and led to training sessions being set up, with space, encouragement and support for the

parents as part of the Train to Gain initiative using the Workers' Educational Association (WEA) trainers. As 80 per cent of pupils' learning in the Early Years and Key Stage 1 has been reported to occur at home, this was considered a further way to improve pupils' learning, through increased parental engagement and the parents' ability to learn and so support their children's learning.

The school also uses the projects offered by the commercial LP provider. During the Beijing Olympics, the children did various projects in their classes around Olympic sports. These varied from archery through swimming to gymnastics; they uploaded photos and videos, which could be seen by other schools around the world, and gained access to other schools' learning platforms through the same commercial LP provider. This included one where the teacher was a gymnast and they could watch that teacher's gymnastic display.

The school is also taking part in the Benni Bear geography project where a teddy travels around the world. They connect with other schools internationally and compare their schools and environments. Recently they connected with a UK school that had visited Kew Gardens, about which they had never heard; they now know a lot about the gardens through the other school's visit.

Each class has its own page, with forums for the children; they host news podcasts on the platform using the Espresso news service as the stimulus and their own internal projects, including a transition project for Year 2 pupils moving up to the local junior school.

In the Early Years Foundation Stage, photos and videos are uploaded as evidence of achievement around the six areas of learning. Parents are also encouraged to do this. There has been a cultural impact where extended families in India and Poland have access to see their young relatives' progress. Recently, the parents of one child uploaded photos of the child's birthday celebrations. They showed the child's Prayer Room, the food being prepared and eaten and explaining why they used their hands to eat, rather than implements. This celebrated the child's culture and tradition and promoted understanding between other pupils and, indeed the teacher.

The learning platform is now embedded in the classroom and the extended school clubs. Pupils have a sense of ownership; if something is achieved, a pupil will suggest it goes onto the learning platform and the class gets together and puts it up there and then.

CPD and training for staff on the use the learning platform

The school has focused largely on training on the basis that if teachers are required to perform a task, then they should have the time and training to develop the skills to do so. This has included all staff across the school and in the extended school clubs. Throughout the LP selection process, as the head teacher was involved, she kept the staff informed so that they were sharing the information and the vision that the learning platform would help them make a difference and improve learning and standards.

Once the platform was selected and implemented, the teachers and support staff were afforded a great deal of training time. This included several formal, whole-school training sessions, led by trainers from the LP provider, the LA and skilled leading teachers such as the head. The teachers and support staff also have a lead teacher for the learning platform, who also conducts training and is available to support other schools that are now starting to implement their own platform.

Formal, directed, in-school professional development time was dedicated to further training led by the head and the lead teacher as well as more informal sessions working together in order to learn the skills that were required to use the learning platform.

Now, one in four formal in-school professional development sessions are still dedicated to refreshing LP skills. Throughout, the emphasis has always been on using the learning platform to enhance learning. This approach combines the functional, technical skills in how to use the platform alongside the pedagogical application of the platform to enhance learning.

The school business manager received formal LP manager training and undertakes all the administration of the platform.

CPD and training for staff via the learning platform

Some supportive online resources are held for teachers on the platform, but, although some training has been received online from an external source, it is not used to deliver training.

Affordances and barriers

The approach of the LA, head teacher and teachers was one of a shared vision and ownership of the implementation of the learning platform; this may be due to the fact that the head teacher was involved in the LA consultation process on choice of LP, and readily fed back to the teachers on progress from this involvement. The whole school agrees that it is all about learning and the learning process. Knowing why the learning platform was being used to enhance learning, with pedagogy at the heart of the implementation, ensured that all members of staff work hard to use the platform where appropriate and possible.

Ensuring that sufficient time, space and training were given to all members of staff so that they acquired the skills before they were expected to use them also facilitated the embedding of the learning platform in the classroom. Teachers and support staff were supported through the allocation of dedicated time through school training days and further directed time for reinforcing the learning through practice. This guaranteed the time and skills required to use the platform so it was not an onerous task for teachers.