Effectiveness of Blended Learning in Initial Teacher Education in Lifelong Learning: A Review of a PTLLS programme

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This research is entirely my own initiative towards personal and professional development. It is based on part of a project funded by the Learning and Skills Improvement Service and developed collaboratively between The City Literary Institute, where I am Head of Programme within Teacher Education and Development, and the University of Westminster, of which we are one of the consortium colleges that deliver initial teacher education for trainee teachers in the Lifelong Learning Sector.

The findings of this research will, however, be shared with the trainee teacher group whose learning experience has been central in informing this research, colleagues who have been involved in the project, cross college and consortium colleagues. Through the scope of the Institute for Learning’s initiative to support research from the lifelong learning sector, this paper will be shared within the wider community of practitioners within this context. Extracts of this paper will also be published within my professional online platform.

**Acknowledgements**

I would like to thank:

- All the trainee teachers who participated in this pilot blended learning programme - Preparing to Teach in the Lifelong Learning Sector – and who demonstrated their skills of reflection, evaluation and feedback when sharing their learning experience.
- My colleagues in our E-learning department, for sharing this experience with me and for supporting me in technology related issues, before, during and after the programme.
- My Department Manager who has supported my enthusiasm and pursuance of blended learning since the last four years.
- The teacher education Course Leaders at both organisations and the Learning and Skills Improvement Service for reviewing the programme in its development, interim and final stages.
- My colleagues at both organisations who were involved in moderating the trainees’ work and shared their thoughts on the effectiveness of this programme.
- JISC, for providing a platform for sharing this programme with the wider community of practitioners and for the encouraging comments from colleagues who attended the ACL conference.
### Acronyms

Readers are directed to the following list that defines the acronyms used in this paper.

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACL</td>
<td>Adult and Community Learning</td>
</tr>
<tr>
<td>BIS</td>
<td>Business, Innovation and Skills</td>
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<tr>
<td>City Lit</td>
<td>The City Literary Institute</td>
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<tr>
<td>CTLLS</td>
<td>Certificate in Teaching in the Lifelong Learning Sector</td>
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<td>CTMT</td>
<td>Centre for Teacher and Management Training</td>
</tr>
<tr>
<td>DTLLS</td>
<td>Diploma in Teaching in the Lifelong Learning Sector</td>
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<tr>
<td>FE</td>
<td>Further Education</td>
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<tr>
<td>GLH</td>
<td>Guided Learning Hours</td>
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<td>HE</td>
<td>Higher Education</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IfL</td>
<td>Institute for Learning</td>
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<td>JISC</td>
<td>Joint Information Systems Committee</td>
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<td>ITE</td>
<td>Initial Teacher Education</td>
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<td>LLS</td>
<td>Lifelong Learning Sector</td>
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<td>LSIS</td>
<td>Learning and Skills Improvement Service</td>
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<td>MKO</td>
<td>More Knowledgeable Other</td>
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<tr>
<td>PTLLS</td>
<td>Preparing to Teach in the Lifelong Learning Sector</td>
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<td>SAR</td>
<td>Self Assessment Review</td>
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<td>SDI</td>
<td>Special Designated Institute</td>
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<tr>
<td>TED</td>
<td>Teacher Education and Development</td>
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<tr>
<td>U3A</td>
<td>University of the Third Age</td>
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<tr>
<td>UoW</td>
<td>University of Westminster</td>
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<tr>
<td>VLE</td>
<td>Virtual Learning Environment</td>
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<tr>
<td>WI</td>
<td>Women’s Institute</td>
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<tr>
<td>WMCETT</td>
<td>Westminster Centre for Excellence in Teacher Training</td>
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<tr>
<td>ZPD</td>
<td>Zone of Proximal Development</td>
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</table>
Abstract

This paper is based on the practitioner action research model and is aimed at teacher educators and staff development personnel within the lifelong learning sector. LSIS, an agency whose primary role is quality improvement and improved engagement of learners in the learning and skills sector, funded a project for developing resources to support alternative modes of delivery for ITE. One of the strands of this project was the development of resources to support the delivery of PTLLS as a blended stand-alone programme and also as part of year one of DTLLS; both programmes are accredited by the University of Westminster. I developed and delivered this programme at the City Lit, a large ACL college in central London and also a SDI. The primary purpose of this small-scale research was to identify if the blended mode of delivering PTLLS would be effective in developing both the knowledge of theory and also the practical skills of a group of pre-service and in-service teachers. Secondly, it was to establish if this mode of delivery would be cost-effective. The results confirmed that trainee teachers on the blended course were able to develop their professional skills and knowledge as effectively as those who attend non-blended courses. It was also found that this mode of delivery is cost efficient in its delivery. It is hoped that others within the sector, who may be seeking to develop similar programmes, will find this research useful.
Introduction

Traditionally, ITE programmes within the LLS are delivered face-to-face, full time or part-time; trainee teachers are generally in-service, except on the PTLLS award, where they are mostly pre-service individuals who have experience or a qualification in a specific vocational area and wish to gain the qualification to teach in the sector. “Initial teacher education programmes need to develop content, context and practice knowledge” (Simpson, 2003 cited in Simpson, 2008: 928). Therefore, traditionally, it is believed that ITE requires classroom attendance in order to support trainees in developing their practice over time. The values of collaboration, critical thinking and reflection are endemic to teacher education (Simpson, 2008). It is widely known that the role of the teacher educator is to support the development of the new or inexperienced teachers in becoming effective teachers and they can do this through designing an integrated curriculum that includes: a) methods that model good practice; b) strategies that support individual needs and motivate the trainees; c) continuous assessment of the knowledge and practical skills; and d) on-going critical reflection on practice, knowledge of theory and attitude towards the pedagogy (Rahman et al, 2011). It can be said, therefore, that this intense learning experience needs time and constant interaction between trainee and trainer, in order to enable the former to gain personal and professional growth.

ITE programmes, therefore, are heavy in cost, requiring high levels of trainer contact time in terms of input and support of trainees’ academic and practical skills development. Recently, ITE within the LLS has had to undergo changes, mainly instigated by the phasing out or cutting of government funding, grants and bursaries and the consequent rise in HE fees in 2011 (HEA, 2011). Within LLS there are a large number of part-time vocational teachers who facilitate training and development of specific skills. Potential experts may be prevented from entering the profession if they have to fund their training without support from the government, possibly causing an adverse impact on the number of people training through the lifelong learning sector and, ultimately, on the UK economy (IfL, 2011). Most of the sector’s part-time academic staff are generally in the mature age group and probably have “other forms of commercial debts or existing student loans and therefore more resistant to additional debt” (IfL, 2011: 2). In order to keep the workforce trained through gaining of the ITE qualifications and to make this training attractive and affordable, most organisations keep the fees as low as possible. This means that ITE programmes are, generally, deficient in income generation.

As a teacher educator and Head of Programme for online teacher training my interest is in exploring different modes of delivery that will make the courses attractive and affordable to both pre-service and in-service trainees within this sector, whilst reducing costs at the same time. My knowledge and expertise in delivering technology-enhanced learning were applied in developing and piloting blended and online learning programmes previously. In 2009, a blended learning programme was developed to make it more attractive and affordable for very part-time vocational teachers to acquire the CTLLS qualification, which was mandatory within the new qualifications framework of 2007 (DIUS, 2007). This programme was evaluated as part of a wider LONCETT research project. In 2010 the Transformation Fund project funded the development of a completely online programme for facilitators of informal adult learning. The outcomes and lessons learned from both these projects are discussed below in the literature review. These were considered during the development of the blended PTLLS programme.

In 2011, as part of new BIS initiative, “New challenges, new chances -Further Education and Skills System Reform Plan: Building a World Class Skills System”, LSIS funded projects to set up new modes of ITE that would be ‘sustainable’, ‘high quality’, ‘fit for purpose’, ‘attractive’ and ‘affordable’ (LSIS, 2011). As a result of a successful bid for some of this
funding, City Lit and UoW collaborated on various blended learning programmes related to ITE. One of my remits was to develop a blended option for delivering PTLLS. If successful the programme was to be shared within the consortium of partner colleges to “provide more flexible, accessible and affordable provision for a broad spectrum of lifelong learning teachers across London and the South East” (LSIS, 2012: 4).

The initial scope of this research, therefore, included the following foci:

a) Can a blended mode effectively develop deeper learning of both knowledge of theory, and also a good standard of practical skills?

b) Can efficiencies in costs be realised by exploiting the blended mode?

**Literature review**

Blended learning, generally, is a combination of two pedagogical models. The PTLLS blended model was based on a mix of tutor contact and self-learning through online learning resources and structured activities that were linked to coursework. The purpose of blended learning is more than applying dual pedagogies; it has an education focus and a business focus. On a blended ITE programme technology can offer trainees a flexible opportunity to acquire skills and knowledge; appropriate learning technologies that support personal learning styles enhance achievement of learning outcomes and also impact on cost of delivering the programme (Donnelly, 2006; Singh and Reed, 2001).

An effective blended ITE programme requires the developer/trainer to engage in a complex process that will provide learners with a transformative rather than just a different learning experience. Using technology innovatively requires a combination of ICT related skills as well as a deep understanding of online learning that enables the creation of a media-rich, individualised, collaborative and interactive learning experience. The course developer has to give rigorous consideration to the pedagogy when planning the structure of the course and the resources and activities that will engage the learners (Simpson, 2008; Donnelly, 2006; Higgins et al, 2004; Coto and Dirckinck-Holmfeld, 2008).

One of the critiques of delivering ITE through blended or online learning, is the adverse impact it may have on professional development of trainee teachers due to lack of opportunity for creating inter-personal relationships, trust and emotional connectedness, which is easily achieved within face-to-face programmes. Their learning is stimulated through the sharing of ideas within a ‘community of practice’, a concept promoted by Lave and Wenger, where professionals who share a common interest come together over a period of time for the purpose of collaborative learning. This theory is influenced by Bandura’s socio-behaviourist and Vygotsky’s socio-cognitivist learning theories. Social collaboration enables the achievement of group ZPD with the support of others within the group and the teacher (MKOs) and, further, they provide an opportunity to raise self-efficacy through the influential discourse of others within the community (Lord and Lomicka, 2008; Coto and Dirckinck-Holmfeld, 2008).

How can this be cultivated in an online environment? Recent studies on blended learning in ITE show that digital tools can help to create collegiate learning communities and facilitate more effective critical discourse than face-to-face discussions. An analysis of the content of online forum discussions amongst trainees revealed strong evidence of academic, cognitive, reflective and social dimensions to the learning. Increasingly, adults are engaging in independent learning where they are required to interpret, question, problem solve and reflect. The teacher educator’s role is as a guide, facilitating the development of knowledge, skills and attitude related to teaching practice, rather than imposing their ‘wisdom’ on the
trainees, as can happen in traditional face-to-face instruction (Lord and Lomicka, 2008; Yang, 2009; Simpson, 2008; Gunawardena et al, 2009).

An analysis of the results of a ten-year study of adult learners on online, blended and face-to-face professional training courses, within college and community contexts, found that overall blended learning had a more significant effect on learner performance compared to online learning and was more cost-effective than face-to-face programmes (Means et al, 2010); blended programmes had comparable retention and achievement rates. This was attributed to the quality of the content, the methods used, the planning of learning time and the blend of the programmes, as well as giving learners control over their learning and the opportunity to spend more time on tasks than is possible in face-to-face learning. On the other hand, trainee teachers on a completely online programme did not benefit from some of the good practices that can be modelled in the classroom, such as those related to classroom management (Butrymowicz, 2012; Means et al, 2010).

Cost efficiency should not compromise quality assurance. Developers can experiment with the plethora of free Web 2.0 tools, adopting a multi-media approach when selecting tools such as forums for communication, audio/visual media as learning material, bookmarking media for storing research sources and collaboration tools such as blogs and wikis for reflection. These can be embedded in open source VLEs, which means there is no direct cost to organisations apart from developer’s time. Tools within VLEs can also be employed by the trainer to check learning progress, learners’ online activity and, most importantly, for e-assessment so that marking can be completed speedily, enabling learners to receive more immediate feedback to make suggested improvements and thereby reinforce learning. Similarly, learners can use the tools to comment on their learning experience, enabling organisations and practitioners to continuously improve provision to meet learners’ demands for flexible and affordable learning through innovative use of technology (Kirkpatrick, 2011; Hill, 2008).

However, if the foci are on educational and financial outcomes, careful consideration has to be given to the blend. A 50/50 model tends to be more resource based and also allows the learner more autonomy in interpreting the course content. It also impacts on the trainer’s role; besides the classroom input the online input requires mainly moderating online discussions and e-assessment. In order to make the most efficient use of learners’ time, they have to be engaged in activities that will support cognitive and collaborative learning, both in class as well as online; at the same time attention has to be given to planning of individual activities in order to support learners’ independence and need for flexibility. This provides an opportunity for the trainee teachers to develop as independent learners whilst also participating actively within a community of practice; it also supports meta-learning – trainees are able to experience the potential of learning technology in facilitating a more cognitive, learner-centred approach (Coto and Dirckinck-Holmfeld, 2008; Donnelly, 2006; Simpson 2008).

LONCETT research (Hulin and Lahiff, 2009) into teacher training and CPD for the large numbers of industry specialists, who were also part-time vocational teachers within the lifelong learning sector, identified time, finance and employer support as some of the barriers to training. It concluded that the blended mode afforded more accessible and affordable training and recommended its potential to ITE providers in meeting the needs of a dispersed workforce who were required to gain the CTLLS qualification and also maintain mandatory CPD. At a reduced GLH the CTLLS programme was offered at reduced fees, which made this flexible mode attractive to the trainees. Though cost efficiency was not the main focus, the reduced trainer contact time resulted in some cost efficiency. Rather than having an adverse effect on achievement, it encouraged more learner autonomy, giving the trainees an andragogic experience of self-directed learning, an approach that these trainees are
expected to apply as teachers of adults (Ashton and Newman, 2006). Feedback from the
trainers, moderators and trainees identified that the programme supported more
independent learning and thinking. All learners acknowledged meta-learning related to the
development of e-learning skills and increased confidence in using ICT. This model enabled
cost-efficiency without compromising the achievement of learning outcomes set by the
awarding body.

‘Leading Informal Learning’ was an online programme led by City Lit in partnership with U3A,
the WI and WMCETT (Crown Copyright, 2010). This programme was developed to support
adults in consolidating and developing facilitation skills for individuals who were leading or
wanted to lead self-organised groups. Learners were supported through self-paced online
tasks, online discussion forums and weekly reflective logs. The purpose of this project was
not cost-efficiency as it was offered free to the voluntary sector. The evaluation report was
focussed on the quality of the learning experience. It was available solely through Moodle,
therefore it was accessible to a wider geographical audience; participants were located in
various parts of London and one in Wales. They came from a range of informal learning
contexts; none of them required a qualification. Their main motivation and expectation was
to gain an understanding of the most relevant adult learning theories and competence in
applying these in their informal practice. The embedded self and peer assessment and
moderation of forum discussions were used to assess formative learning of theory. Practical
skills were assessed through observation of videoed teaching practice and formed the
summative assessment. The quality was variable; deeper learning was evident from those
who had actively engaged in the forum discussions and completed the online tasks, whereas
those who were inconsistent in their participation demonstrated surface learning. Feedback
from the participants found this to be a well-structured interactive programme; they reported
increased confidence, an enhanced sense of being part of a community of practice, and
improved access to, and use of, technology and digital literacy skills. Overall, this
heutagogical experience of self-determined learning, an approach that provides an enriched
teaching methodology for lifelong learning in the 21st century, was found to support these
group leaders of informal learning (Ashton and Newman, 2006).

After the above review the initial foci of this research were refined into the following two
questions:

a) How can a blended learning ITE programme impact on effective achievement of learning
outcomes?

b) To what extent does a blended learning ITE programme impact on financial and quality
enhancement?

Methodology

The approach used for this research is based on the model of practitioner action research,
which is a diagnosis of a problem followed by an experiential cycle of experience, reflection
and evaluation, conceptualisation and planning. In this type of research the practitioner is
seeking to: a) improve or transform their professional practice; b) produce a living
educational theory and insight into their professional development; and c) gain deeper
knowledge and enhanced expertise to make a contribution to others who share the same

My action cycle started with the development and delivery of the blended PTLLS. It was
allocated a reduced GLH for classroom contact and a time-tabled online presence of the
trainer, with a view to encouraging independent learning. The whole course structure was
based on the five stages of the teaching cycle. Active learning and group development outlined the attended sessions, particularly to support development of practice. Multi-media learning material and communication tools were embedded in Moodle (the VLE used for this programme) for cognitive development through experiential and collaborative learning. Though the learners had the freedom of flexible learning, they were directed to work to assignment deadlines, which were flagged up through Moodle’s calendar tool. Monitoring tools allowed weekly checking of learner progress and follow up group and individual communication motivated the trainees and kept them on task.

At the end of the programme the trainees provided the primary qualitative data as a heterogeneous study group through their course evaluations and semi-structured interviews. Other qualitative data was also gathered from colleagues who were involved in the quality assurance process. Quantitative data related to quality and cost efficiency was also gathered.

**Ethics**

There were variances in the contexts, backgrounds and motivations of the trainee teachers (Figure 1). Eight of the nine enrolled trainees were involved in the final evaluations and interviews (one of the trainees (BM) left the course after the second session, as they gained employment).

<table>
<thead>
<tr>
<th>ID</th>
<th>NAME</th>
<th>ETHNICITY</th>
<th>GENDER</th>
<th>Written English skills</th>
<th>ICT</th>
<th>Academic experience</th>
<th>Teaching experience</th>
<th>MOTIVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BJ</td>
<td>white British</td>
<td>F</td>
<td>no issues</td>
<td>confident</td>
<td>post-graduate</td>
<td>current experience as trainer</td>
<td>To develop current practice</td>
</tr>
<tr>
<td>2</td>
<td>BM</td>
<td>white British</td>
<td>F</td>
<td>no issues</td>
<td>OK</td>
<td>First degree</td>
<td>informal experience with children</td>
<td>thinking about teaching adults</td>
</tr>
<tr>
<td>3</td>
<td>CA</td>
<td>white other</td>
<td>M</td>
<td>EFL</td>
<td>qualification</td>
<td>post-graduate</td>
<td>current ACL tutor</td>
<td>develop current practice and gain qualification</td>
</tr>
<tr>
<td>4</td>
<td>FP</td>
<td>white British</td>
<td>M</td>
<td>no issues</td>
<td>confident</td>
<td>First degree</td>
<td>experience in training</td>
<td>considering teaching young to adults</td>
</tr>
<tr>
<td>5</td>
<td>GM</td>
<td>white British</td>
<td>F</td>
<td>no issues</td>
<td>confident</td>
<td>post-graduate</td>
<td>current experience as trainer</td>
<td>formalise current practice</td>
</tr>
<tr>
<td>6</td>
<td>HC</td>
<td>white British</td>
<td>F</td>
<td>no issues</td>
<td>confident</td>
<td>First degree</td>
<td>current experience as freelance trainer</td>
<td>gain qualification</td>
</tr>
<tr>
<td>7</td>
<td>KA</td>
<td>white British</td>
<td>F</td>
<td>no issues</td>
<td>confident</td>
<td>post-graduate</td>
<td>current experience as volunteer art tutor</td>
<td>professional development</td>
</tr>
</tbody>
</table>
Bearing in mind “ethical issues (…) influenced by contexts of cultural difference and which impact on educational experiences” (BERA, 2011), all of the trainees were involved in a semi-structured interview, which comprised of six main questions and some supplementary questions to clarify first responses (Figure 2).

1) Were the learning objectives and assignments made clear to you? (Supplementary question if response not clear: When and how was this done?)

2) Do you think the content was relevant, appropriate and clear? (Supplementary question if response not clear: Which of the resources did you find most useful and why?)

3) Were you able to access all the online material easily? (Supplementary question if response not clear: Did you have to ask for any support and if yes, was this support given to your satisfaction?)

4) Which aspects of online learning did you enjoy the most? (Supplementary question if response not clear: What would you consider to the most important part of your learning experience?)

5) Approx, on average, how many hours did you spend per week for your online study?

6) How did this course help the development of your theoretical knowledge and practical skills?

The respondents were made aware of the purpose of the interview questions and informed consent was sought from all individuals prior to the interviews. Half of them agreed to be recorded on a digital recorder and the other half agreed to be filmed (these were used, with consent, in a presentation at an ACL conference run by JISC in January 2013). They were also assured of anonymity if they so desired. The trainees were given an opportunity to privately collaborate on sharing their experiences before the interviews.

Trainees also submitted feedback through the general course evaluation forms (Figure 3); the feedback was also used in gathering qualitative data.
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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<tbody>
<tr>
<td>2. What did you like, and what suggestions would you make, about the teaching approaches and resources, including Moodle?</td>
<td></td>
</tr>
<tr>
<td>3. Please comment on the usefulness of support and feedback you received – on assignments/in tutorials etc</td>
<td></td>
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<tr>
<td>4. Please comment on the usefulness of observations on your teaching (including microteaching).</td>
<td></td>
</tr>
<tr>
<td>5. Could you describe how the course has/will impact on your career as a teacher or trainer?</td>
<td></td>
</tr>
<tr>
<td>6. Do you have any other comments/suggestions you would like to make to help us improve?</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3:** Course evaluation questions for trainees

Whereas the course evaluation questions are general and used by the department for SAR purpose, the interview questions were specific to the learning experience on the blended programme. Also, these were submitted anonymously.

To reduce bias and maintain objectivity, comments were invited from moderators at both City Lit and UoW (including an external examiner). After the JISC presentation a PTLLS course leader and a trainer from another organisation. This was considered to be secondary data. Finally, quantitative data was requested from the budget holder of ITE programmes at the City Lit. The purpose of this research was shared with all of the individuals who provided the qualitative and quantitative data. The results will also be shared with them.
Qualitative data

This iterative process of qualitative research has enabled a “deeply reflexive process, (which) is key to sparking insight and developing meaning” (Srivastava and Hopwood, 2009: 77). Revisiting the research findings of previous projects and comparing data gathered from this project has supported the basis of practitioner action research. It is true to say that the personal action learning cycle is subjective, where the researcher starts with what they need to do and then plan and act to support their needs, including seeking strategic support of others (Zimmer, 2008).

Interviews and course evaluations

The first dataset came from course evaluations, which are standard to all trainees who participate in ITE at City Lit. The questions are related to course administration, the quality of teaching and the effectiveness of the learning experience in supporting professional development. The interview questions were, on the other hand, designed to elicit responses that were specific to the blended PTLLS programme.

Loo (2008) has identified some advantages and disadvantages of semi-structured face-to-face interviews. On the one hand they provide flexibility; based on responses the researcher can modify the questions or ask supplementary questions to examine the respondent’s motives. The human element also enables understanding through non-verbal cues. On the other hand, interviews can be time-consuming as they have to be carefully planned and prepared, appointments have to be arranged and the recorded material needs to be transcribed. Also, there is danger of lack of standardisation as the responses can be affected by the respondent’s perceptions and when the interviewer is their trainer, the responses may be less reliable – some may be over-critical whereas others may say what they think the trainer wants to hear.

The course evaluations were completed anonymously; this type of data collection encourages respondents to give more honest feedback (Loo, 2008). The questionnaires can provide more generalised information that is specific to the learner and learning programme, providing more reliable standardised information. However, the responses can, once again, be biased depending on the respondent’s experience, which can sometimes be affected more by personal issues rather than the actual experience. Also, if the meaning of the question is not clear, the response can be unclear too.

Feedback from colleagues

These were individuals who formed a homogenous group. The question asked of the moderators was aimed at answering the original research focus related to the effectiveness of the programme in terms of knowledge and practice development of trainee teachers. To manage the limited time, as each individual was based in different places, email was used as a method for requesting comment. This type of information gathering provides individual, in-depth accounts (Loo, 2008) from people who have independently participated in the same process. Their account was useful as secondary data to corroborate the trainee’s and my own observations on the effectiveness of the programme.

Validity and reliability of qualitative data methods

The data gathered and the way it was gathered is valid inasmuch as it enabled reaching a conclusion that answered the research questions. The interpretation of the data determined the “plausibility and credibility of the results” (Schofield, 1993, cited in Srivastava and
Hopwood, 2009: 82). Though qualitative methodology presupposes an inductive approach, where the answers are expected to naturally flow from the data, in this case the data was very definitely interpreted reflexively. My main focus was to find an answer to my first question – effectiveness of blended learning in ITE. It can be argued, therefore, that the results interpreted could be subjective. There was, however, a vested interest in getting authentic conclusions for enabling future development of similar programmes of ITE. The feedback from the trainees can be considered to be the least biased. There is always a marginal possibility of getting false feedback for reasons outlined above. However, upon scrutiny it was heartening to see that the learning on reflection and evaluation was applied by most of the trainees during their interviews as well as through the evaluation questionnaire. They used a medal and mission approach, giving constructive comments on various aspects of their learning experience.

**Quantitative methodology**

Quantitative data was gathered in order to answer the second research question – the cost efficiency of the programme. Statistical and inferential tools were used to analyse and interpret the raw numbers within the organisational SAR and the department’s curriculum database. The former yielded quality data and the latter gave financial information; both are summarised in this paper to answer the second focus of this research (Woodley, 2004; Reinard 2006).

**Validity and reliability of quantitative data methods**

Quantitative methods should be valid – measuring what they are meant to measure, and reliable – the results should be consistent (Singh and Reed, 2001). This can be ensured if a range of methods is used in collecting the data and analysing it. The researcher can collect the data personally, through use of organisational databases, published data or through observation. Or they may ask relevant individuals directly for the required information. In all cases the perspectives of the person collecting or the person from whom it has been gathered can affect the validity and reliability of the data. For example, in the case of this research I can only access the data that has been shared by the budget holder. The data is valid as it measures cost-efficiency and quality assurance; it is reliable as the results can be replicated.
Results

Initial discussion is based on the qualitative data gathered through the methods identified in previous section.

Interviews and course evaluations

Trainees’ feedback (Figure 4) recognised that the blend of the face-to-face and online learning was “just right”. Three out of the eight trainees said they would have preferred one more face-to-face session for social reasons but that this did not detract from their learning (Lord and Lomicka, 2008). Overall, the two initial classroom sessions were found to be very useful in forming the group, engaging in practical and learner centred activities and seeing good practice modelled by the trainer. The mid-course microteaching session was identified as a most useful opportunity to learn through observation and peer feedback. Similarly, the tutor feedback on the assessed microteaching session at the end was a positive experience as it enabled trainees to get confirmation on their development. Trainees also found the final session useful in reflecting on the learning journey (Rahman et al, 2011; Simpson, 2008).

Trainees recognised the value of having multi-media learning material. The audiocasts and speaker’s notes supported their learning preferences (Hill, 2008). The online structure of Moodle was identified as too linear and ‘clunky’ and recommendations were made to simplify the structure in terms of quick and easy access. Similarly, three of the trainees concluded that though the course had given them flexibility they realised that they prefer classroom learning. One of these trainees did identify that it had enabled them to become more confident in using technology.

Trainees appreciated the provision of online communication tools (Gunawardena, 2009). Some of the trainees were disappointed that others were not responsive to their initial activity of sharing resources and reflections on learning. One of the trainees would have preferred that their peers had made a greater effort in the social learning process (Hill, 2008; Lord and Lomicka, 2008; Coto and Dirckinck-Holmfeld, 2008).

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>GM</td>
<td>really useful when we had to work together on peer assessment</td>
</tr>
<tr>
<td>VM</td>
<td>(teacher) warm, encouraging, patient and passionate about the subject</td>
</tr>
<tr>
<td>PG</td>
<td>practical and learner centred</td>
</tr>
<tr>
<td>CA</td>
<td>learning outcomes and course content made clear during initial sessions</td>
</tr>
<tr>
<td>BJ</td>
<td>it was so nice just to see other people’s practice and to practice in such a safe group of peers</td>
</tr>
<tr>
<td>PG</td>
<td>as an observer, I had the opportunity to learn from the methods, resources and approaches used by my peers</td>
</tr>
<tr>
<td>GM</td>
<td>I feel I gained the knowledge and skills I had identified for myself at the beginning of the course (to make) tangible changes to my teaching</td>
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<tr>
<td>KA</td>
<td>having access to both the audio and written notes for each topic on Moodle was extremely useful (…) so depending on how the week was going, where I was studying I had the option to do both and to re-visit it</td>
</tr>
<tr>
<td>BJ</td>
<td>I really liked your YouTube clips we had to watch on Moodle, really liked that, it was very helpful. I never thought I was such an audio learner, it was just very helpful to hear your voice</td>
</tr>
<tr>
<td>MG</td>
<td>(e-assessment) improve(d) my practice as a facilitator (and) my assignments</td>
</tr>
<tr>
<td>FP</td>
<td>I don’t think online learning is for me, I’m apprehensive about IT anyway, it’s a challenge for me to do it but it meant I didn’t have to commute to City Lit every week (because of my health).</td>
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even though the online tools were available it is very difficult to be disciplined and make the time to do this

**Figure 4:** Trainees’ feedback from interviews and course evaluations

Feedback from colleagues

Moderators focused their comments on learner achievement (Figure 5). The external examiner found the course structure easy to navigate and found there was a right balance between information giving and self-learning. The internal and external moderators confirmed unanimously that the trainees’ coursework was comparable to that of other programmes that were delivered face-to-face. They did not think the online learning had any adverse impact on the development of their theoretical knowledge or practical skills (Lord and Lomicka, 2008; Means et al, 2010). In fact, the internal moderator commented that in some cases she found that trainees had demonstrated a higher standard of work than usual and their knowledge of theory underpinned their practice. The programme appealed to the colleagues from the outside organisation and emphasised that they would be happy to deliver it in its current format.

| CL | really impressed with the amount of information and support available online (…) it was easy to navigate and engaging (…) you have struck the right balance between giving information clearly and encouraging self-learning |
| IT | certainly the trainee didn’t seem to be at any disadvantage through learning this way (…) no negative impact was noticed in terms of the standard of work in the portfolio |
| BB | the blended learning approach chosen for the PTLLS course worked well (and) on the evidence seen at the moderation, I would say that the fact that the course was blended did not have a negative effect on the practical skills and written work |
| MS | compared well with the work produced on a standard face to face course (…) showed a strong theoretical understanding of teaching and learning processes and in two cases I looked at, an even stronger understanding than I would normally expect to see |
| MS | microteaching does not suffer at all as a result of the ITE approach (…) I felt that the theoretical grasp of concepts translated very well into the microteaching and underpinned the necessary practical element of the training |
| AD and R | Instructional design VLE is easy to use, clear and user friendly; full of rich and high quality resources which are current, accurate and authentic learning resources well organised in sequential order from the start to finish liked the fact that it started with clear tutorial on how to use the resources resources included in all section are jargon free (and) fair and free from bias volume of materials (and) activities under each section is well balanced resources foster deeper understanding of the subject programme is appealing to the intended audience material is one of the best PTLLS resources we have come across and as a provider we would happily use it to deliver our programme straight away |

**Figure 5:** Colleague’s feedback
The following is an analysis of the quantitative data gathered for the purpose of this research.

Comparative cost information

The total training cost for this programme was 40% less than a comparable traditional face-to-face programme. In contrast, there was only an 8.2% reduction in the fee income. Both these figures suggest that per student there is a recognisable overall cost efficiency of 40% from the blended learning programme and the fee income generated returned a profit of just over 41%, whereas a like for like traditional programme would have made a loss of around 8%. Overall, this data has confirmed that flexible modes of learning can realise cost-efficiency for the organisation and the reduced fees can make such programmes more affordable to learners (Kirkpatrick, 2011).

Quality Assurance data

The quantitative data from a quality assurance perspective shows 89% success rate for the blended programme (of the nine students enrolled one left after the second session due to a change in personal circumstances). Of the eight continuing trainees all achieved. Comparing this to an average 87.5% success rate for the traditional PTLLS programmes (attributed generally to non-achievers) and the national benchmark rate of 87% the blended programme appears to have higher results (Means et al, 2010).

As with all quantitative data it is important to note that the size of the learner group can have a significant impact on the educational and financial expectations of the blended learning mode.

Discussion

The evidence presented answers the two initial foci of this research (Singh and Reed, 2001). My own observations and assessment of the trainees' academic coursework, their planning and teaching practice had identified that the blended programme had enabled them to make their own constructs from the combination of modelled practice during the classroom sessions and the online learning material. This experience provided them with a deeper understanding of the approaches they can use with their own current or future learners (Donnelly, 2006). The data confirmed that the theories of Social Learning, Andragogy and Heutagogy (Simpson, 2008; Kirkpatrick, 2011; Lord and Lomicka, 2008; Gunawardena et al, 2009; Ashton and Newman, 2006) applied in the development and delivery of this blended learning PTLLS programme, did contribute to its effectiveness in realising the learning outcomes and that the blended mode of learning does effectively support the knowledge, skills and attitude of trainee teachers on the PTLLS ITE programme. This is also confirmed by the quantifiable data of the success rate of this blended programme, that it can be higher than or equal to those in face-to-face programmes (Means et al, 2010). Finally, the reduction in GLH and course fees made this a flexible and affordable option for trainees and at the same time realised some cost-efficiency for the department (Kirkpatrick, 2011).

As the researcher there is a temptation to focus on the positive results. However, if this mode of programme is to be more widely adopted it is my responsibility, as a practitioner, to review and reflect on the results of this research. Some of the trainees and one of the moderators did not find the online experience as fulfilling as the classroom sessions. This suggests that blended learning should be considered as another mode of delivery and cannot replace traditional face-to-face programmes. The feedback on the VLE structure has identified that technology can be frustrating and, therefore, there is always a possibility that it will demotivate the learner from sustaining their learning through this medium. Effecting
practical learning solutions can alleviate learner frustrations and possibly afford a more stimulating learning experience (Donnelly 2006). This matter can be resolved with the support of my e-learning colleagues by making navigational changes before the next course.

**Conclusions and recommendations**

The questions that arose after the literature review have been answered by this research, as discussed above. Blended learning (or for that matter distance learning) is not a new concept in ITE. With greater understanding of alternative approaches with the use of evolving and innovative learning technology, practitioners can constantly review and improve learning programmes. The trainees of this pilot programme had the common motivation of time and cost. Blended learning can become a preferred and optimal way of gaining the initial teacher training qualification and also develop ICT skills concurrently. Similarly, blended modules can support those on longer ITE programmes as well as for CPD. Our department will be delivering another blended learning PTLLS in the 12-13 summer term and this will be evaluated and compared with the one that informed this research. For the next academic year it has been decided to run further two programmes, with one of these replacing one of the traditional programmes. It will be interesting to gather more qualitative and quantitative data to establish if this type of programme can become embedded within curriculum planning.

The set-up costs of a similar blended programme can be very high, not in terms of the software or hardware but in the development time. The creation of resources and structure of the programme is time-intensive and requires high levels of skills in developing technology-enhanced learning. On this occasion the funding from LSIS supported the development of this programme and as its developer I had the knowledge and skills-set to design and deliver it. Unless similar funding is available, an organisation, especially in the ACL sector, may not have the resources for such a development. In the current climate of reduced funding, alternative ways of delivering learning, such as blended learning, can be developed efficiently through partnerships between organisations that deliver ITE. Pooling resources of staff with appropriate digital literacies and sufficient funds can realise an innovative and transformational learning experience for the 21st century teacher (Ashton and Newman, 2006). Discussions need to take place at higher levels to adopt a more collaborative approach of working together to review, innovate and disseminate, in order to keep our sector attractive to potential trainee teachers and financially viable.
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Khorshed Bhote

I am a practitioner within the post-compulsory (lifelong learning) education sector. I have been a teacher for very many years, starting my teaching career as a freelance music teacher. Since the last 13 years I have been in adult and community learning, as an applied computing lecturer within a range of contexts and within staff development and teacher education.

I am a member of the Institute for Learning and hold the QTLS status.

As an educational coach I have experience in supporting academic staff as well as mentoring colleagues undertaking postgraduate study.

My passion is using technology for learning. Since the last three years I have developed resources and curriculum for delivery of online training of mentors and facilitators of informal learning and also blended learning programmes for Initial Teacher Education (ITE). I have also undertaken practitioner action research in the effectiveness of these programmes in terms of developing teaching/training skills.