Introduction

A review of international perspectives on quality in initial teacher education (ITE) undertaken by Bills et al. (2009) identified the quality of partnerships between the provider and schools as the major concern in improving quality. Hence the focus on the school experience element of ITE programmes in this paper. It has been argued (Dewhurst & McMurtry 2006) that successful learning for trainee teachers on school experience is dependent upon a range of social factors: belonging, participation, collaboration, responsiveness and clear and successful communicating. These factors can be difficult to achieve in ITE programmes and represent a key challenge for ODL and traditional programmes to achieve quality outcomes. Using some of our own research and that of others, we consider:

1. The development of ODL in ITE and the introduction of new methodologies in relation to the quality agenda
2. A range of ODL solutions to enhance quality in school experience
3. The personalisation of trainee teacher development
4. The convergence of ODL and traditional methodologies in ITE programmes

Throughout this paper, we use the term initial teacher education (ITE) to denote that part of a teacher’s education that leads to fully qualified, licensed or credentialed teacher status. We also use the terms trainee teachers to denote the unqualified status of teachers who undertake these ITE programmes and school experience to denote the school placement or practicum element of ITE.

Open and Distance Learning in Initial Teacher Education

ODL has become an established part of national teacher education provision in both developing and developed countries (Burgess & Shelton Mayes 2010). It is promoted as a key strategy to achieve The Millennium Development Goals (UN 2000) and Education for All (WFoE 2000) based, primarily, on its success in addressing a range of teacher education issues, such as cost, supply, access and diversity.
A review of initial teacher training and ODL by Moon and Robinson (2003) concluded that there are three advantages over traditional programmes requiring residency: resource efficiency in terms of buildings, teaching staff and funds, thereby reducing the overall cost of producing a teacher; supply, in terms of drawing on new constituencies and producing more teachers within a timeframe; and curriculum and training, through strengthening the relationship between theory and classroom practice.

It is unsurprising that ODL approaches have been identified as offering the most potential for the major expansion of teacher supply required in developing countries, given the success of a number of high volume ITE programmes (Burgess & Shelton Mayes 2010). For example, ODL programmes in China, Nigeria and Pakistan (see Boxes 1 and 2) have made considerable numerical contributions to teacher supply at an affordable cost and have been successfully integrated into established national teacher education systems.

**Box 1 The China Television Teachers College (CTVTC)**

This has provided large-scale teacher initial education since 1994 based on transmission of television programmes linked to face-to-face meetings. Much of the provision is aimed at enabling unqualified primary and secondary serving teachers to gain initial qualifications (about 11 per cent of all primary and secondary teachers in 1998, many in rural areas, were identified as unqualified). This programme uses a mixture of satellite television and video, some print, audio and face-to-face classes. CTVTC produces centralised compulsory core television to create a unified syllabus, materials, timetable and assessment methods throughout China. A nationwide system of Provincial Radio and TV Universities are responsible for learner support and local organisation. As with conventional ITE in China, there is little emphasis on practical teaching but the TV supports exemplification of practice. China is developing Information, Communication and Technology (ICT) on-line programmes alongside this provision.
Between 1987 and 1999, 717,300 unqualified primary teachers and 552,000 unqualified secondary school teachers became qualified through this route. (UNESCO 2001).

Box 2 Allama Iqbal Open University (AIOU), Pakistan
This provides pre-service primary teacher training programmes that have been successful in reaching women and those in rural communities (50% and 60% of the trainee teacher population respectively) compared to conventional teacher education programmes. The Primary Teaching Certificate programme enrolled close to 165,000 teachers for the 1995/6 cohort.

The distance learning methodology is through text material, radio and television. The programme also requires attendance at demonstration lessons and workshops, and a four week practical training experience in a school. (Yes Pakistan 2002)

In the developing countries of South Asia and Sub Saharan Africa, the scale of demand is unprecedented and exacerbated by health issues, such as HIV-Aids (World Forum on Education 2000; United Nations Millennium Goals 2000; Burgess & Shelton Mayes 2010). This demand for teachers has led to high volume projects using ODL, such as the teacher education programmes of the Open University of Sudan, targeted at upgrading the qualifications of over one hundred thousand primary teachers (Moon et al 2007).

ODL programmes that receive international funding are also commonly designed to have an impact on access and equality issues (Burgess & Shelton Mayes 2010). For example, the ODL teacher education programmes in Eritrea were aimed at creating opportunities for females, who for cultural or religious reasons were unable to move away from their home and families, and for those in remote rural communities, whose economic and domestic difficulties prevent them from leaving their localities (Rena 2007). This resonates with the educational inequalities identified in the Millennium Goals Report (United Nations 2008) for girls, those in poor and rural communities and those affected by political unrest and conflict.
High volume supply is not the only reason for developing ODL ITE models. Where specialist subject teachers for example technology or teachers for the deaf are required Mashile (2008) argues low volume sophisticated approaches can be successful. In a context where low trainee numbers are threatening the teaching of specialist subjects then an ITE ODL model is a defensible solution. An equivalent model has emerged in the UK; for example, the University of Northampton’s Employment-based Initial Teacher Training programme, which has low secondary specialist subject numbers, makes use of some subject specific ODL materials as part of a school and university delivered programme to ensure viability.

The major rise in the number of ODL programmes being developed can be seen as a response to the clear success of ODL in terms of teacher supply. However, it is important to remember that the Education for All commitment was to a quality and completed educational experience. Research has consistently shown that fully prepared and certified teachers are more successful and better rated than untrained teachers (Darling-Hammond 2000) and, therefore, ITE programmes must also address the issue of preparing high quality teachers (Burgess & Shelton Mayes 2010).

Research on ODL programmes, that have achieved high quality outcomes, has emphasised the importance of the integration of school –focussed activities (Moon and Shelton Mayes 1995; UNESCO 2002 and Moon et al 2007). The Fort Hare University Primary B.Ed project in South Africa (Moon et al 2007) (see Box 3) requires that theory and practice are brought together in the design of specific classroom-based activities undertaken by the trainee in schools to enhance their practice. There is also a strong emphasis on individual trainee support by school-based staff, who are trained to carry out a mentoring role. In essence, this is a mixed model of conventional face-to-face and ODL, particularly where the completion of the range of school experiences is concerned and the individual trainee requires school-based support.

Box 3 Primary B. Ed programme, South Africa
This emphasises school-based improvement through qualification upgrading. It was developed by the Distance Education Project (DEP) and covers eight semesters. Two
courses are presented each semester through eight *imithamo* (printed booklets). The content covers core education studies, for example, helping learners and schools as learning communities and aspects of learning, such as literacy, numeracy and mathematics, natural sciences and technology. The terms mentoring and tutoring were thought to be inadequate to describe the roles of those who worked on the programme and therefore the term *umkwezeli* (a person whose job it is to keep the fire burning) was chosen. The role of *Abakhwezeli* is to discuss, support and facilitate understanding of the printed materials and most are local teachers or principles. *Abakhwezeli* are monitored by Educator and School Support Officers (ESSO) who are approved by the Department of Education. In addition, Regional Coordinators and Centre Coordinators provide academic, administrative and logistical support. This programme exemplifies how teacher training programmes can exploit the practicum through bringing together exploration around theoretical issues in a context that informs discussions around key pedagogic and subject focussed themes. In particular, it makes use of existing facilities and mobilises community support alongside a partnership with the Department of Education thus providing affordable, contact-based, support for teacher learners. (Moon, B., Leach, J. and Stevens M. 2007)

Assessing how far trainee teachers are applying what they have learned in the practical context is one of the most difficult problems for the provider to gauge. This assessment task must be undertaken throughout the school experience by school-based mentors, who are operating at a distance from the provider. In their review of ODL ITE programmes, Burgess and Shelton Mayes (2010) argue it is critical that any ODL programme has at its heart a model for training the school-based mentors as well as the trainee teachers.

The UNESCO (2002) report on ODL confirms that a combination of conventional and distance learning methods are likely to achieve better quality ITE outcomes. This suggests that high quality ODL programmes require school partnership models where the focus is on the individualised development of the trainee supported by school-based staff. However, the individualised support by trained staff required to enhance
individual teacher practice cannot achieve the attractive low costs of other high volume delivery ODL models (Burgess & Shelton Mayes 2010).

During school experience, the trainee, whether on a traditional or ODL programme, is essentially undertaking an individualised teacher development programme that is dependent on the quality of the school-based support that operates in partnership with, but isolated from, the ITE provider, except for limited visits. Developing high quality school experience, therefore, requires high quality school-based mentor development and the integration of university and school-based elements of the programme. This represents a common challenge for both ODL and traditional ITE models.

A challenge embedded deeply within ITE programmes and, particularly, within ODL programmes is the way ITE teachers develop their pedagogic knowledge and both learn about and put this into practice in school-based settings. Using the potential of teaching and learning in school-based situations alongside the assimilation of ideas presented in programme materials to develop trainees’ professional thinking, skills and practice remains a major challenge (Burgess and Shelton Mayes 2010). A new perspective is brought to this issue by Hutchinson (2009) who researched the learning opportunities that are presented to trainee teachers as they discussed teaching and learning issues with their school-based mentor and university tutor. He argues that

In Wenger’s (2007) terms the university perspective has limited expressibility in the school context. Conversely, contextualised ideas are strongly presented, through a discussion of ‘what works’, either in that school or in other schools, either imagined or real. With a lack of dissonant perspectives, opportunities for expansive learning opportunities, when mentors, tutors and students discuss teaching, are lost. What emerges from the study is the richness of the contextualised planning and discussion process when resources, ideas, concepts, myths, knowledge and practice from a variety of different contexts are brought together in what one of the participants calls ‘a mish-mash’ of ideas; a process of bricolage, where elements are creatively brought together to form a new entity with new meaning but one in which the original provenance becomes lost with re-use and re-versioning. (Hutchinson 2009 p.304-305)
Developing understanding about the way that learning opportunities are presented to trainee teachers, particularly in ODL programmes where most of the training is school-based is an important challenge to address. Hutchinson argues that ‘when teaching is presented as a process of bricolage and when provenance is not fully articulated, opportunities for expansive and systemic learning are restricted’ (ibid p. iii) and suggests the complexity of the task of teacher training and the importance of a ‘learning partnership’ and specific training for tutors and mentors that focuses upon learning rather than activity remain issues that need to be addressed within the Open University flexible PGCE. These findings resonate with the view of Welch (2008), who suggests that a particular challenge for ODL is designing courses that will nurture dialogue and integrate learner support. Furthermore, there is a challenge to involve not only the individual teacher in teacher education but the whole school as well.

There is much that traditional ITE programmes can learn from this ODL focus on the integration of school-based and university-based aspects through the development of school-focused activities and the shift in mentor training to support this.

**ICT Solutions to Enhance Quality in ITE**

The introduction of ICT in ODL teacher training has had a significant impact in terms of distribution of materials, two-way electronic communication, the use of networked computers allowing multi-way communication and diversification into resource based self accessed teacher education. (Perraton et al 2002). However, given the critical importance of the school experience in supporting the development of high quality practice, each of the above functions of ICT can be used to enhance the quality of traditional ITE programmes.

The development of ICT supported learning is one of the key successes in ODL ITE, for example, in the development of subject and pedagogical mathematics knowledge (Box 4). This system also offers potential for the growing personalisation agenda whereby trainees are expected to achieve increased progress during ITE based on an
individualised training and development programme that meets their specific needs (see section on personalisation below).

**Box 4 Primary mathematics subject knowledge, UK**

This study looks at the challenge of meeting quality and assessment standards through the use of ICT with 194 trainee teachers undertaking subject knowledge development in mathematics as part of an Open University Primary PGCE programme. The model was conceptualised as a three stage process: Identification where subject knowledge areas for development were identified through a mathematical knowledge audit; Personal Development where trainees studied a purpose designed mathematics text with e-conference support; and Directed Support where trainees were directed to specialist subject knowledge e-conferences for coaching and support depending on what was required. Such training continued until the trainee was signed off by their tutor. The training could include face-to-face assistance, if necessary.

Despite the diverse range of subject knowledge at entry to the one year PGCE programme and the wide geographical spread of the trainees the model of e-learning combined with face-to-face and text based materials demonstrated that all applicants could achieve equally good subject knowledge outcomes that met the national assessment subject knowledge standards in mathematics.

(Burgess & Shelton Mayes 2008)

Video-conferencing has also been used extensively on ODL programmes, when the trainees are geographically isolated. In Scotland, the training of Gaelic-medium teachers for Gaelic communities is addressed through an ODL ITE programmes involving the use of video-conferencing (see Box 5) this poses some important pedagogic problems.

**Box 5 Video-conferencing, Scotland**

This small study in Scotland reports on student views on the use of videoconference as a tool for learning in a primary teacher training distance education programme in Gaelic-speaking communities. Thirty students at remote sites used the
videoconference and reported on their experience of its use in terms of pedagogical support, social presence and student engagement. Despite needing to travel to access the videoconference facilities, most students found being on the distance learning programme beneficial as it enabled them to work from home and eased child care and other family commitments. The opportunity to work in schools in the area also meant they developed contacts in the schools which would be helpful in the future. The use of the videoconference produced mixed responses: some students stating that they could not have undertaken the course without it while others found problems with the conference suites, which were described as “poor” and having technical hitches. Problematic issues were also noted where tutors were not familiar with the medium. The interaction of the group that met together at the conference site was, however, highly valued by the students. The greatest benefit for the students appeared to be when a tutor was present at a site; in this situation, students reported that the material seemed to be better and more responsive to their need. The videoconferencing element did bring benefits in terms of access and social communication among peers but there were issues that needed to be addressed in terms of training for staff, technological limitation and reduced flexibility. (Gillies 2008).

The use of video-conferencing and other opportunities using digital filming and streaming technologies to record trainee practice at a distance, whilst not extensively used in traditional ITE programmes, has real potential to enable more effective tracking of individual progress throughout the school experience by the provider. However, the filming of classroom practice does require a careful consideration of school permission protocols in relation to national child protection systems and other privacy and safeguarding issues.

The strengths and weaknesses of different forms of ICT such as accessibility and funding costs both in terms of production and ongoing support once a programme is in place will have an impact upon the successful outcome of the use of ICT. The lack of systematic research documenting informative and accessible outcomes from teacher training projects, which have adopted the innovative use of new technologies, has also been a problem in terms of extending knowledgeable use of ICT. Paradigm
shifts in the use of ICT (Hoppe et al 2003) identify e-learning (learning supported by
digital electronic tools and media) as separate from m-learning (e-learning using
mobile devices and wireless transmission) and suggest that hand held devices are
emerging as a promising technological solution to learning compared to the stand
alone computer. Challenges in adopting and using m-learning remain, however; the
difference between what is possible in developed countries and developing countries
is beginning to emerge as an issue that needs to be urgently addressed. However, the
next generation of trainees, as ‘digital natives’ with extensive experience of using m-
technologies and social networking, will lead to raised expectations for ICT in ITE.

Wright et al. (2009) argue that there must be a sound rationale for employing any
form of ICT. They address a range of issues that include the lack of infrastructure and
internet bandwidth, countering the cultural impact of using materials from Western
countries, managing limited educational resources and the implementation of mobile
learning. There are successes to draw on in terms of using hand held devices. For
example, the Deep Impact Project (Leach et al 2005) used hand held computers for
teacher professional development in Cairo, Egypt and the Eastern Cape where
teachers were seen to deploy their use for a range of activities, from lesson
preparation and assessment notes to taking photographs for curriculum use. A key
disadvantage was lack of proficiency in the use of the English language, a particular
problem for teachers who worked in Arabic and in both contexts there were issues
around technical support.

Research by Seppala and Alamaki (2003) and Vickery et al. (2006) document
developments in teacher training programmes that used m-learning in Finland and
personal digital organisers (PDA’s) in the UK respectively (see Boxes 6 and 7). Both
programmes aimed to create flexible teaching solutions and support learning in a
variety of situations in a developed context.

Box 6 Mobile Technology, Finland
This project, carried out at the University of Helsinki, Finland, explored the use of
mobile technology for teacher training and, particularly, how trainees and supervising
teachers felt about it. In Finland around 70% of the five million inhabitants have
mobile phones and approximately 98% of university students so it is a society highly experienced in mobile technology. The model for teacher training made use of face-to-face instruction, network-based learning and instruction via mobile device. Within the project, the trainees were instructed to discuss teaching issues, use SMS-messages and take digital pictures so that supervisors could send feedback and ideas related to training sessions. Trainees then put together a digital portfolio using the photographs and the network discussion. An important aspect of the project was that content could be produced anywhere. The project was evaluated in terms of convenience, expediency and immediacy. While both sets of responses from supervisors and trainees were positive the latter were more enthusiastic about the use of mobile technology, readily using it to send numerous messages among the trainee group and to take pictures, which they thought were particularly important acquired skills for their professional development as teachers of home economics. The use of the pictures enabled trainees to become aware of things they had not noticed in the real situation and proved helpful in analysing their teaching methods with their supervisors. Picture messaging emerged an additional enhancement to the trainee learning.

(Seppala and Alamaki 2003).

### Box 7 Using PDAs, UK

This research investigated how the use of personal digital organisers (PDAs), with GPRS access to the Internet, could help to support secondary teacher ICT trainees on school experience. The aim of the project was to reduce the sense of isolation and develop an e-learning community. Findings indicated that trainees do need and use an e-learning community but prefer to use personal mobile phones and home PCs rather than a PDA. Crucial issues appeared to be:

1. Technology is not the crucial factor, there is a need for a human facilitator or mediator and regular engagement
2. The quality and versatility of the technology is important. The PDA did not have the range of functions and quality available through other devices
3. There needed to be more training in the use of PDAs before the school placement particularly where other forms of technology are available
4. Specific software linked to the teaching experience for use with the PDA
needs to be developed for it to be an effective technology
(Vickery et al 2006)

The above case studies identify some of the benefits and difficulties of using mobile technologies in teacher training in a developed country. A particular issue in developing countries is the infrastructure to support mobile learning and the training of trainers and trainees in the use of equipment (Khan & Khan 2007). Some developing countries have areas that do not have access to electricity; this reality has prevented the use of mobile technology. However, a solar-powered phone went into production in April 2009; one hour in full sunlight will provide enough power for a 15 minute conversation, with a full charge requiring eight hours (Anderson 2009). Such developments make access to teacher training and professional development through mobile technology a possibility, world wide.

Technology is only one component within ITE but it is also an aspect of curriculum learning that both trainees and trainers need to address. When it is embedded within a programme, greater success in learning appears to be achieved. For example, in Chile, when teachers chose an on-line version of a programme rather than the face-to-face option, they developed a much greater on-line facility and a network communication culture, which resulted in ongoing supported learning (UNESCO 2001). The challenge presented, where programmes and training already exist, is one of integration of ICT into training in order to update existing teachers and improve their qualifications. The Jiangsu Radio and Television University (JRTVU) in China developed a programme to upgrade the skills and qualifications of in-service teachers who teach English through integrating low and high technologies in ODL (Zhang & Hung 2007). In the process, a number of challenges emerged. For example, the success that the teachers had with the programme was not mirrored in the tutors’ responses.

In many countries where competence in ICT is now a requirement for qualified teacher status, delivering elements of a traditional ITE programme using e-learning can simultaneously support both the required professional and subject learning and ICT competence.
On traditional ITE programmes in the UK, it is now commonplace for providers to use Virtual Learning Environments (VLE) as a repository for ITE documents, to provide guidance for trainees and school staff and to enhance communication between university, school staff and trainees, which serves to combat the isolation of trainees on practice. In allowing the provider access to information on trainee progress throughout the school experience, it can be used as a vehicle for improved intervention. It is also increasingly common for traditional ITE programmes to use ODL methods to train those mentors who have not been able to attend face-to-face training. For example, the University of Northampton’s VLE is used to maintain communication when its trainees are undertaking school experience in more than 350 partner schools. It has also developed bespoke mentor DVD training packages to ensure an entitlement to mentor development across all partner schools.

The examples here suggest that ICT developed specifically to address quality issues in ODL programmes are increasingly being used in traditional programmes. In relation to partnership with schools and the school experience, ICT is used to enhance communication with tutors, trainees and mentors; to facilitate enhanced opportunities for advice and guidance; to reduce trainee isolation; and to provide an immediate visual record as context for discussion and development.

The personalisation of trainee development

Teacher shortage, quality, access and diversity drive ODL solutions in both developing and developed countries. However, one emerging difference is in the area of personalised ITE programmes. The need for intensive flexibility in order to address individual needs of teacher trainees and produce a personalised initial teacher training programme is highly developed on the UK’s Open University PGCE programme for secondary ITE (Box 8). The advantages are in the ability to fast-track towards completion, acknowledging through accreditation of prior experience and learning (APL) that ITE programmes should not be the same for all but based on a needs analysis undertaken at the start of the programme. This issue of APL is raised as an important issue of cost and speed in the Sub-Saharan Tool Kit of ODL (Moon et al 2007) and is also identified as an important issue in South Africa where a model for
recognition of prior learning (RPL) in relation to the National Professional Diploma has been developed (Welch 2008, Moll & Welch 2004). Moll & Welch (2004) contend that RPL models may help to develop the trainee teacher but they can remain flawed if they do not engage the institution in the need to transform academic programmes and curricula. Transformational models seek to recognise non-formal and experiential learning for itself but do not attempt to match such knowledge and learning with knowledge within the institution. RPL provides the possibility for programmes to generate teacher quality but not if it is used only as a mechanism of mass access to a programme.

The issue of personalisation is gaining emphasis in ITE in the UK, linked to external national inspection requirements to ensure all trainees make appropriate progress in order to meet their potential (Ofsted 2008). This requires differentiated development plans dependent on trainee need and systems to continually monitor individual trainee progress and intervene as necessary whilst on school experience. ODL methodology within more traditional modes of ITE through use of individualised e-learning (Burgess & Shelton Mayes 2008 – see Box 4; Hutchinson 2006 – see Box 8) and enhanced communication between provider and school present advantages linked to personalisation of learning and flexibility to achieve fast-tracking of trainees through to completion. This presents an increasing blurring between ODL and traditional teacher education methodologies.

**Box 8 Flexible PGCE, UK**

This programme aims to address issues linked to increased social diversity within the teaching profession and to help combat low teacher recruitment through an individualised programme. The programme utilises a blend of learning materials, local tutor based support, and partner schools. In particular, in terms of fast-tracking students through the programme and accrediting previous learning a Needs Analysis model identifies for each trainee an individualised training plan with flexible start, finish and assessment times. There is also the option to complete the programme full-time or part-time. The course is structured around six thematic strands and three course levels identified as Familiarization, Consolidation and Autonomy. The thematic strands are revisited at each of the course levels and are available as modules.
on the web. These are linked to conventional print course readers, set books and video and audio material. Each trainee maintains an Individual Training Plan (ITP) that sets out the amount of training to be completed for assessment at the end of their individualised course. A small number of trainees are able to complete the course on an assessment-only basis because of their prior experience. 

(Hutchinson 2006)

The key quality challenges

In this paper, we have argued that the school experience is the key element to achieve high quality teacher outcomes on ITE programmes. At the point of undertaking the school experience, there is little difference between ODL and traditional programmes, in that the school and school staff as mentors become the key factors in supporting trainee development. The provider, operating at a distance, must develop effective partnerships with schools in order to deliver consistent development programmes for trainees that are able to operate effectively given the diversity of schools. It is, therefore, unsurprising that the examples reviewed show a growing convergence in the methodologies adopted in ITE programmes: using face-to-face methodologies in ODL programmes and ODL methodologies on traditional ITE programmes in relation to school experience.

The quality of the school experience depends on enhanced three-way communication between schools/teachers, ITE providers and trainee teachers to produce greater cohesion between the school experience and the university-based elements of ITE programmes. In particular, improved communication can help reduce trainee isolation, support stronger links between theory and practice and take account of the diversity of schools as a factor that impacts on the quality of training. ODL methods integrated within conventional programmes provide additional opportunities to achieve higher quality through the focus on school-focussed activities and the enhanced use of ICT to aid communication and monitoring of practice at a distance. Wright et al (2009) identified the importance of the rationale behind the development of the ITE programme and the future vision – as both need to match the funds
available and the sustainability of the programme. They argue that in all contexts it is
the effectiveness of the tutor that matters and not whether they meet trainees face-to-
face or through videoconferencing or develop online materials, as tutors are the key
ingredient in any educational system. This applies equally to the school-based
mentor.

Successful ITE must address issues linked to the trainers as well as the trainees. This
issue clearly emerged in the Gillies (2008) study in Scotland and the Khan and Khan
(2007) study in Bangladesh. This emphasises a major challenge for ITE to create
viable pedagogies that take into account but are not driven by ICT. If traditional and
ODL programmes are converging, particularly through the use of ICT, then the
expertise of tutors, whether university or school-based, must become a key focus for
development.

The case study examples, drawn upon in this article, indicate that ODL ITE requires a
mixed mode of training if it is to achieve high quality outcomes and that there are no
cost savings in terms of the school experience unless ICT is much further developed
and integrated into the programme. There is adequate evidence that trainees do not
use ICT unless it is integrated into the activities that they are required to do and that
trainers find some uses of ICT take them out of their comfort zone and can make them
less effective teachers themselves. Integration in terms of training for all partners is
important for successful outcomes.

The school-based focus upon practice within settings remains a key strength of ODL
ITE although its full power as a tool for teaching and learning is not fully realised.
Traditional programmes have often been less well integrated though this is a
developing area. Some of the case studies presented identified the importance of
linking pedagogy and practice and the future role of action research as a means of
transformative change in ITE programmes that can utilise new models which promote
integration of ICT, community and individualised and contextualised learning into
their curriculum.
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