

Teaching and learning of ICT to EAL learners in the primary phase

'It is the responsibility of the school leadership team to ensure that ICT is used appropriately and imaginatively to meet the diverse needs of bilingual learners. Children learning EAL need to learn English through the curriculum as well as learn the curriculum through English.' DfES (2006).

EAL learners face a triple challenge in their learning. They have to acquire both colloquial and academic English; they must develop the knowledge, skills and understanding of that curriculum; they must also overcome the culturally-bound aspect of UK schooling. EAL learners, particularly new arrivals, may struggle in these three areas for a while as they learn to catch up with their peers.

This guidance offers suggestions to tutors and trainees on how to prepare EAL learners for the demands of the ICT curriculum.

QTS Standards

Q1 Q2 Q10 Q14 Q15 Q18 Q19 Q22 Q23 Q25

ICT - a discrete subject or across the curriculum?

Primary schools take different approaches to the teaching of ICT. The Rose interim report, DCSF (2008), suggests that ICT '*should be taught both discretely to capture its essential knowledge and skills, and through its applications across the whole curriculum to deepen understanding.*'

What approach best suits EAL learners? It is well understood that meaning is conveyed most effectively when learning is embedded in a comprehensible context. For EAL learners, and particularly those at early stages of acquiring fluency in English, the knowledge, skills and understanding of the ICT curriculum can prove difficult to convey if taught in a de-contextualised way. For these learners, procedural descriptions of techniques and discrete teaching of ICT skills should be kept to a minimum. When ICT is primarily taught 'through its applications across the whole curriculum', trainee teachers will need to consider the socio- linguistic challenges in the curriculum task as well as the ICT challenges.

Example 1

In a KS2 class the dual focus of the lesson is on ICT objectives related to 'exchanging and sharing information' and a literacy task based upon 'writing to inform'. The class teacher decided that pupils should produce a tourist information leaflet about the locality using ICT. In the introduction, the class teacher displayed a local tourist brochure on the IWB and the class teacher asked the pupils to think carefully in pairs about audience and purpose, using appropriate language and the effective use of layout as well as font style and formatting in order to 'exchange and share information effectively.

Some aspects of this activity are supportive of EAL learners. For example, there is a context to support meaning. EAL learners will benefit from the opportunity to talk about the task in pairs prior to writing and to work collaboratively to prepare relevant content for the leaflet. However, some other aspects of the task may lead to difficulties. For example, we are not sure whether all learners are familiar with the area, nor do we know if all learners are familiar with 'the appropriate language' for a tourist brochure. In fact, although pairing learners and providing an exemplar is helpful, in reality the teacher is assuming that learners 'know' what a tourist brochure looks like and are able to at least approximate the tone and language features in their own work.

To make this task more inclusive, the teacher could begin by drawing on and out children's knowledge and experience. Pupils may want to discuss who tourists might be, why tourists might visit their local area and what they might like to see. She may want to include opportunities for pupils to visit and take digital pictures of the local area, locate images of national sights on Google or through other image sources and then write captions, blurbs and headlines. Learners will also need to become familiar with the language used in brochures through comparisons with similar different texts and analysis of the language used. For example, the use of question devices such as 'Why not visit...?', and other appropriate ways of making suggestions. She may want to provide a literacy

scaffold or a part-completed text so that earlier stage learners can communicate their meaning through the task:

Why not visit.....?

- It's
- It's.....
- You can
- You can....

Come to

- It's
- It's.....
- You can
- You can

She may also want to consider whether it would be helpful to encourage pupils to develop content in languages other than English.

All of these 'assumed' skills and experiences will play a part in learners' capacity to fulfill the ICT objective of 'exchanging and sharing information' in a linguistically and culturally defined way.

The benefits of collaborative learning

The benefits of collaborative learning for EAL learners are well documented, yet it is very common to see pupils working alone at a computer, embroiled in some form of individualised study. This can be quite isolating for EAL learners, particularly those still acquiring full academic proficiency in English. Good practice recommends that EAL learners are paired or grouped with strong English language role models or with pupils who speak the same first language, in order to facilitate purposeful discussion prior to ICT-based tasks with a strong literacy element.

Wegerif (2004), suggests that EAL learners can benefit from the 'thinking together' approach that encourages pupils to engage in exploratory talk when involved in ICT. Exploratory talk enables participants to create meanings, knowledge and understanding in the process of solving problems collaboratively. Through 'thinking together', EAL learners develop both colloquial and academic language in a supportive context. Evidence suggests that ground rules for talk need to be agreed by individuals and practitioners should develop talk prompts that scaffold the oral interaction.

Example 2

In a topic entitled 'Where we live', a year 2 class has been asked to identify and mark 5 key places around their school locality using Google Earth. The movement controls in Google Earth have been modelled for the class, they have been shown how to add a landmark and how to find a location by postcode. The class has been asked to work in pairs.

This is a very supportive activity as there is a clear context, modelling has taken place, there is plenty of visual support via the software and pupils have been paired up in order to allow them to talk about the task. Pairing EAL learners with strong English language role-models will also help.

In order to bring about exploratory talk, the practitioner could also develop some talk prompts such as

Where is...?

What name shall we give to... ?

How far away is....?

What direction do we need to move?

Should we zoom in or out?



These could be typed up into a Word document and be accessible during the task.

More ideas can be accessed in a NALDIC video [Using Google Earth with EAL learners](#).

The NALDIC ten part series of EAL and ICT vodcasts covers many aspects of using ICT across the curriculum to support language learning and is a valuable source of information and ideas for tutors and trainees. Links to all the programmes and a range of ICT related articles can be found at <http://www.naldic.org.uk/docs/resources/ICT.cfm>

The vocabulary of ICT

Like all curriculum subjects, ICT has its fair share of technical vocabulary that can be a barrier to learning for some EAL pupils. There are numerous acronyms that are common currency for pupils who have grown up with ICT, but these may require additional explanation for some learners. There are many terms that also have more common synonyms, such as 'drive, window, menu, control, mouse, cell, routine'; these may need specific clarification.

Many words and phrases have very specific meanings related to software, hardware and technique, However, there is no need for terminology like this to be inhibiting for learners who do not know the words and phrases in English. A visually stimulating, language rich environment is very supportive including displays showing keyword lists and picture prompts. Pupils with strong literacy in first language may benefit from keyword translations as they may have ICT experience from other contexts. Becta's (2005) [Say IT](#) series of translated keywords would be useful here and is downloadable in 28 languages. Other aids include well illustrated skills-based 'how to.' exemplifications and clearly annotated NC progression routes in keeping with up to date assessment for learning guidelines.

Pre-teaching critical vocabulary prior to the lesson may be a useful strategy for some beginner bilingual learners.

Example 3

In a year 3 class, the teacher orally reminds the class about how to copy and paste text from one place to another in preparation for an information gathering exercise on a historical theme.

Lengthy oral explanations of techniques may prove confusing and ultimately unsuccessful for many EAL learners. Practical demonstrations of techniques via an IWB will help, as will representation through the use of visuals, such as icons and symbols.

e.g. Edit >> Copy and Edit >> Paste



Modern technology offers a multitude of supports for learning, yet ironically, some of these might prove confusing for EAL learners. Davies (2004) succinctly demonstrates this through the example of word processing, where scaffolds such as grammatical errors outlined in green, spelling errors in red and online access to synonyms and dictionaries are only of use once the learner has internalised a sufficient level of English. Software and online tool tips like this will need a specific teaching focus to ensure that EAL learners use them effectively.

Choosing appropriate media

Access to multimedia and multi-modal approaches to learning are very supportive of EAL learners. Kinaesthetic approaches, and the use of audio-visual elements can add more meaning than a more mono-modal, text-based approach. However, the appropriacy of audio-visual material should be carefully considered, as those with a heavy cultural bias may serve to confuse more than they help. For example, the choice of video material from YouTube should be previewed and selected to avoid cultural bias or inappropriate images and language.

ICT-based texts, particularly those sourced from the Internet are not always the most appropriate for EAL learners because of the language level. Text may be very dense, contain a lot of technical vocabulary, acronyms and idiomatic language that requires a good grasp of literacy in order for learners to gain full understanding.

Example 4

In a Year 6 class studying an environment topic, the class teacher selected a number of different websites for pupils to research the pros and cons of building dams. The websites were chosen according to relevance to the topic rather than

age-appropriateness of the text. Pupils were also encouraged to do some keyword searching in search engines to find other relevant websites.

Many students, including EAL learners at different stages of English language acquisition can struggle to access text on websites unless they have been specifically constructed for an age-appropriate audience.

EAL learners may need to be supported to access less linguistically challenging texts and those with better visual support. The class teacher could introduce the research topic by suggesting an image search on 'dam'. Access to these images can give pupils clear access to the meaning of the keyword as well as an insight into some of the different situations where dams might be built which they could briefly discuss with a partner.



The class teacher could then offer a keyword glossary of the most important terms, utilising online dictionaries. Alternatively if the class contains more advanced learners of EAL, 'Vocabulary' is a tool which allows users to run online text through a simple process so that each word in the text is hyper-linked to a dictionary or translation site. Pupils literate in first language might benefit from the translation aspect or from keyword or short phrase translations. Online translation engines can help here, although they will not give semantically or grammatically accurate translations and should be used with caution.

Open keyword searching often exposes pupils to texts that are too demanding. Some EAL pupils may also struggle to choose appropriate key terms and may need some specific examples e.g.

dams + damage environment + impact + dams dam + safety dam + protest

'the environmental impact of dams'

Pupils will benefit from specific modelling of the use of logical operators and other techniques for customising online searches. Judging the relevance of search results can also be extremely difficult for some EAL learners.

A digital divide?

The embeddedness of ICT within the home and the confidence in their use by adults, clearly has a bearing upon in school and out of hours learning for school-age pupils. It can be easy to 'homogenise' black and minority ethnic populations as an excluded target group in terms of access to, and participation within, ICT. ICT includes computers and other information and communication technologies such as mobile phones, digital cameras etc. Recent studies of adult populations by Ofcom (2006), shows that minority ethnic groups have somewhat higher levels of media literacy than the UK population as a whole, using such devices regularly. Home access to the internet is higher among minority ethnic groups and they use the Internet more regularly.

However, it is clear that some families and learners may be disadvantaged by socio-economic factors. Recent new arrivals, particularly those from refugee and asylum-seeking backgrounds, may not have consistent access to a variety of forms of ICT, including computers and Internet connections. The Government's upcoming 'Home Access Programme' enables disadvantaged families to apply for funding for a computer, software and training. It is important for student teachers to find out the school's 'ground rules' on setting tasks that require home access to ICT to ensure that some learners are not disadvantaged or, conversely, advantaged. The ability of some parents to effectively support their child's ICT-based homework may be a factor worth considering in this.

Research-based homework tasks that require access to the Internet or mobile technology may be problematic and some pupils will need opportunity to access ICT during the school day and after-school. This would also be the case for tasks that require interaction with the school's learning platform.

Example 5

A year 5 group has been working on the novel, 'Street Child'. The student teacher has asked them to perform two tasks by the end of the unit.

Using the school's learning platform:

Task 1 – to develop a personal 'blog' that discusses how the main character's feelings might change throughout the story.

Task 2 – to contribute to a 'wiki' about the social/historical context of the story e.g. terminology such as work-house, child-labour etc.

There is a clear context here, directly linked to the curriculum. There are other aspects of the task which are supportive of EAL learners. For example, the 'blog' and the 'wiki' are both aimed at communicating understanding. The 'blog' requires a more speech like form of writing which is often acquired more quickly than the nuances of more formal academic writing. Thus blogs can provide a useful 'way in' prior to more formal academic writing. Similarly the construction of a wiki is both collaborative and supports learners in making meaning from the class text as well as supporting their understanding of a historically and culturally bound novel. Constructing a wiki provides the opportunity to be explicit about these historical and cultural terms and support the understanding of these through a contextual layering and frequent revisiting.

However, some potential issues are

- Familiarity with the learning platform tools
- Out of hours access
- If the blog is completed individually it relies on a good understanding of the text. The student teacher will need to be clear whether the success criteria is around the blog or the understanding of the text which the blog demonstrates
- Blogs and wikis have their own forms which learners will need to approximate to be successful

EAL learners, and many others, will benefit from the opportunity to see modelled examples of blogs and wikis. Many blogs and wikis, for example, utilise very similar icons and tools to normal word processors – the transfer skills from one context to another will need to be made explicit.

An alternative option or a preparatory task could be for pupils to use handheld video or audio equipment to record a vodcast/interview in pairs or as a group. This would provide learners with a concrete and memorable experience which could form the basis of a modelled exemplar blog which the teacher could build up with the pupils in class, demonstrating how icons are used in the construction.

Use of ICT to support EAL learners across the curriculum

Whilst this guidance document is about accessing EAL learners to an ICT 'curriculum' it should be recognised that ICT has a wider role in supporting pupils in their learning across the curriculum. Common themes include utilising ICT to support pupils' access to tasks, maintaining and developing pupils' first languages, multi-modal learning and use of online tools to support communication and promotion of an intercultural dimension within the curriculum.

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Useful links and resources

BECTA (2004) *Using ICT to support students who have English as an additional language: General guide for managers and all teachers*

http://partners.becta.org.uk/upload-dir/downloads/eal_managers.pdf

BECTA (2005) *Say IT series*
<http://foi.becta.org.uk/display.cfm?resID=35820>

DfES (2002) *Access and engagement in ICT: Teaching pupils for whom English is an additional language.*
<http://nationalstrategies.standards.dcsf.gov.uk/node/97993>

ICT for EAL pupils
<http://www.naldic.org.uk/docs/resources/documents/ICTandEALcasestudyreport.pdf>

NALDIC ICT and EAL Vodcasts http://www.youtube.com/view_play_list?p=C51EA34FA5807FF6

Voycabulary - <http://www.voycabulary.com/>

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<http://www.becta.org.uk/homeaccess>

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<http://www.naldic.org.uk/docs/resources/documents/Notjusthowbutwhy.pdf>

DCSF (2008) The Independent Review of the Primary Curriculum: Interim Report
http://publications.teachernet.gov.uk/eOrderingDownload/IPRC_Report.pdf

DfES (2006) Excellence and enjoyment: Learning and teaching for bilingual children in the primary years: ICT for EAL http://publications.teachernet.gov.uk/eOrderingDownload/2144_06_ict.pdf

Ofcom (2006) Media Literacy Audit: Report on media literacy amongst adults from minority ethnic groups
http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/minority/minority.pdf

Wegerif, R. (2004) The role of ICT as catalyst and support for dialogue in *NALDIC Quarterly* Vol 1 Number 4
<http://www.naldic.org.uk/docs/resources/documents/TheoleofICTascatalystandsupportfordialogue.pdf>

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