



Support for English, maths and ESOL

Module 13

Using ICT to support the development of
English and maths skills

Aim



To enable participants to explore and use ICT as a core means of raising learner achievement in English, maths and ICT

Outcomes



By the end of the session participants will be able to:

Understand and explain the benefits of using ICT to support the development of individual learners

Identify the planning issues involved in using ICT as a core means of raising learner achievement in English and maths

Use individual learner aims in English and maths to carry out appropriate ICT-based activities

Develop an English and maths lesson plan so that the activities focus on ICT as a core teaching and learning method

Identify and access learning environments, delivery methods and ICT resources in the development of English and maths skills

Confirm increased personal confidence in the use of ICT to develop English and maths skills

Commit to specific actions to develop the use of ICT in their own teaching and in the organisation

ICT – what and why?



Work in groups of 4 to discuss:

- a) Some of the ways in which you currently use ICT
- b) Your main reasons for using ICT

Feed back to the group.

BIS Review – December 2011



“There is increasing evidence of the contribution of ICT skills to literacy and numeracy demands in social and employment contexts, including in particular a combination of ICT and mathematical literacies in the workplace.”

‘Review of research and evaluation on improving adult literacy and numeracy skills’
BIS, December 2011

“... we found significant gains in ICT literacy and in learners' confidence with ICT. This included the use of internet searches (such as Web Quests), of mindmaps to plan writing, of tablets, and of m-learning (using technologies such as mobile phones and hand-held computers) to improve language skills and extend the classroom. All groups showed improvement in English reading ability...”

What is effective practice? In ICT?

NRDC, 2007

Our analysis pointed to four guiding principles for using ICT in a *Skills for Life* context:

- Foster learner autonomy
- Enhance peer collaboration
- Plan the construction of artefacts
- Aim for technological diversity

We also identified two strategies that do not appear to work:

- Telling learners how to do the task rather than listen, discuss, prompt and extend
- Teachers using PowerPoint

Why use ICT for teaching and learning?



- We are in a technological age.
- ICT increases learner autonomy.
- ICT facilitates peer collaboration and sharing.
- ICT allows learners the opportunity for self-paced work in their own time
- ICT enables learners to work, practise and develop their skills between, and in addition to, formal classroom / workshop sessions

Why use ICT to develop English and maths skills?



English / literacy – the facts

- Most writing is done through office applications or via emails and texts
- The majority of reading for information is now done online
- Increasing numbers of people read for pleasure on electronic devices, such as Kindles, i-pads etc
- Access to documents often involves downloading and (occasionally) printing
- Many people listen and watch online for information and pleasure (e.g. podcasts, catch-up, webinars, YouTube, downloads)

Why use ICT to develop English and maths skills?



Maths / numeracy – the facts

- Many people use office applications, digital calculators, specialist software to make calculations
- Many people use office applications to find and develop spatial representations, scale drawings, graphs, diagrams
- Many people enjoy interactive network sites for number games, quizzes

Why use ICT to develop English and maths skills?



The blended learning option

Blended learning is an approach to teaching, learning and assessment which combines and aligns:

- face-to-face, instructor-led learning
- collaborative peer working
- online, mobile and interactive working
- self-paced learning using virtual and 'real time and space' materials and resources

Trying something new in the classroom!



In pairs:

1. Using cards, match learner activity (*in italics*) to ICT applications (in bold)
2. Share your findings with the whole group
3. Select a group of learners you know. Focus on either maths or English. Plan a series of up to SIX activities using at least TWO ICT resources or applications you haven't used before
4. Use websites, search engines and your internal virtual learning environment (VLE) if available. Explore online and 'office' resources to plan your session

Tips for using ICT in the classroom or workshop



- ICT aids learner autonomy and empowerment in the classroom
- Working in pairs or groups keeps activities dynamic and avoids the computer becoming a solitary activity
- Strict timings for ICT activities maintain pace and purpose
- A timed carousel of ICT activities can hone English and maths skills just as workout in a gym can develop physical skills
- ICT applications allow for a greater range and diversity of activity within a short space of time
- Working with speed and spontaneity, using ICT, prepares learners for fluency in language and mental agility in maths

Collaborative working in English and maths



In small groups:

1. Choose either handout HO 8 or HO 9
2. Discuss the problem: How can the learners use a shared online space to complete the assignment effectively?
3. Make notes for stage 1 on the planner (HO 11)
4. Swap your planner with another group; amend and make notes for stage 2; repeat for stage 3
5. Retrieve your original planner. How has it developed? Has it improved? Has it given you ideas you hadn't thought of?
6. Share your findings with the whole group

The time factor for English and maths



“(It was) concluded that 100 hours of instruction is the point at which a majority of adult students are likely to show educationally significant progress.”

“Research from the US has produced figures of 100-150 hours (for adult learners) to progress by one grade level.”

“Analysis of 2006/07 ILR data shows that the average GLH for all literacy qualifications was 64 hours and for numeracy was slightly lower at 62 hours.”

***‘Review of research and evaluation on improving adult literacy and numeracy skills’
BIS, December 2011***

The time factor for English and maths



- Most learners do not receive as many as 100 GLH each for literacy and numeracy alone
- To rise by one level in English or maths, most adult learners need to persist with study and practice for many hours outside their GLH quota
- Ideally we need to support learner persistence through a 'blend' of teaching and learning methods
- ICT provides us with a wealth of opportunities for study and practice outside the classroom / workshop in the learner's own time and at the learner's own pace

Coaching tips



- Your role is to help the coachee form realistic goals
- Do this by asking questions:
What...? How...? Why...? Who...? What else...?
- Give advice ONLY when asked for it
- The aim is to enable the coachee to 'own' the goal

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